APPENDIX K

Claim Charts for U.S. Patent Nos. 5,778,187, 5,983,005, and 6,434,622

Claims for U.S. Patent No. 5,778,187 filed May 9, 1996	102 and 103	A DAVIC MIB for Video System Management	Other References
1. A method for transmitting message packets over a communications network comprising the steps of:	102 and 103	DAVIC MIB describes an element management system for an interactive video services system that transmits message packets over a communications network. See, e.g., abstract; See also p. 110, left col. The DAVIC-managed video services system includes video servers, a network management system, a delivery network, and end user set top boxes. See, e.g., p. 111, left col. The video servers include a service gateway element, a streams element, an applications element, and a content element. See, e.g., p.111, left col. The service gateway, streams, and application elements of the video server communicate with the set top boxes by exchanging packets (e.g., UDP or IP) over the delivery network. See, e.g., p. 113, right column ("The basic table in MIB-II is *ifTable*. There is an entry in this table for each interface in the system. This has counters for the number of octets/packets sent and received and the number of errors as well as the type of the interface and its current state."). Accordingly, the preamble limitation of "transmitting message packets over a communications network" is disclosed by DAVIC MIB.	
converting a plurality of streams of audio and/or visual information into a plurality of streams of addressed digital packets complying with the specifications of a network communication protocol,		DAVIC MIB receives broadcast content and delivers that content over a digital network, necessarily requiring a conversion of the received broadcast content into an addressed digital packet stream appropriate for delivery. Specifically, DAVIC MIB discloses using a delivery network to provide broadcast content, near video-on-demand, and video-on-demand. See p. 111, left hand col., 1st para. In making the broadcast content available across a communications network, that is, in enabling access to over-the-air television network programming across the delivery network shown on page 111, DAVIC MIB inherently discloses converting the broadcast signal to a format appropriate for distribution. [Id.]. Even the specification of Monteiro '187 recognizes the need for a conversion in order to make broadcast content available for distribution on a digital network: Referring to FIG. 2, the incoming signal can be received in a variety of ways such as from a satellite, over-the-air broadcast, cable or hard disk. It is then processed by Receiver/Decoder 110, which decodes the signal and provides an incoming audio stream. [4:25-30]. Accordingly, through the receipt and digital delivery of broadcast content, DAVIC MIB discloses converting a stream of audio/visual information into a stream of addressed digital packets. Furthermore, DAVIC MIB contemplates that the digital packets are addressed. DAVIC MIB implements the management system in an IP-based network context, necessarily contemplating that streams of packets generated by the video servers are streams of "addressed" digital packets. See, e.g., p. 113, left col., which describes a *sessionTable* including entries for *sessionStreams* and	

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	sessionApplications that identify streams and applications by associated IP addresses. Stated differently, because DAVIC MIB discloses routing of packets in an IP-context, it would be understood that a destination address (e.g., an IP address) must be placed in the packet header, thereby meeting the claimed limitation that the stream contains "addressed digital packets."	
for each stream, routing such stream to one or more users,	The logical topology described in DAVIC MIB indicates that each stream is routed over a delivery network to one or more users. Specifically, the DAVIC MIB architecture is illustrated, including specific references to interfaces S1-S4 between the video server and the end user set top boxes (STBs) "for communicating MPEG streams" over the delivery network to one or more users. See p. 111, column 1, DAVIC Server Architecture. In this logical topology, it is clear that streams are routed over the delivery network from a streaming source to end users. Also disclosed is the use of the application element MIB of the video server to "identify] the end user of the application and the local interface being used by the stream," again evidencing that the stream is routed to the end-users. Notably, the availability of IP and ATM routing standards is mentioned. See p. 113.	
controlling the routing of the stream of packets in response to selection signals received from the users, and	DAVIC MIB describes two instances of control that are performed in response to selection signals received from users. The first involves management of an interactive voice services system to provide video on demand (VOD) services. See p. 109, abstract. Specifically, the VOD services provided in accordance with DAVIC MIB delivers video streams "on demand," thus initiating a packet stream in response to selection signals reflecting the input demand. The second instance of control exercised by DAVIC MIB in response to user selection signals involves leveraging the service gateway. Page 111, column 2 describes "processing] all end user requests for service" and the related network management processes of "terminal[ing] a session or stream" or otherwise "controlling]" the stream responsive to the processed end user requests. See p. 111, Service Gateway Element. Through these two exemplary sections, the packet stream is controlled by DAVIC MIB in response to user selection signals.	
monitoring the reception of packets by the users and	A streams element of the DAVIC video server communicates with the end user set top box over the delivery network to monitor stream transmission to the end user set top box during the streaming session. See p. 111, left column ("The elements are linked to set top boxes via interfaces into the delivery network... The interfaces used by the STBs are referred as S3, S4 (for control) and S1 and S2 (for user requests and video stream)."). In particular, the streams element MIB contains TRAPS that are used to report conditions reflecting the status of stream reception by an end user, namely whether a stream has been rejected, aborted, or somehow otherwise subjected to communications problems at the set top box. See p. 112, right col. ("Streams Element MIB – The streams Element MIB contains several counters, some TRAPS, and the *streamTable*....	

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	The TRAPS are used to report on exceptional changes in state of a stream such as rejections, aborted streams, and communication problems."). Accordingly, the DAVIC video server determines whether or not a stream of packets is successfully communicated to a user device (i.e., the set top box) and thus "monitor[s] the reception of packets by the users," as claimed.	
accumulating records that indicate which streams of packets were received by which users, wherein at least one stream of packets comprises an audio and/or visual selection	DAVIC MIB indicates which streams were received by which users through maintenance of a *sessionTable* within a Service Gateway Element MIB. See, e.g., p. 113, left column ("There is also a *sessionTable* which records the …*sessionStreams* – [an] identifier of the stream supporting this session") and see, e.g., p. 113, right column ("Note: the identity of the user of this session is not included in the *sessionTable*. Rather, there is another table of clients to the video server. Each entry contains a field *sessionIndex*. Using this field, it is possible to relate users with their sessions.").

Also maintained by DAVIC MIB is a TRAP, which reflects information concerning streams that have been rejected, aborted and otherwise subject to communication problems. See p. 112, right column. Inasmuch as the *sessionTable* records could be compared to and filtered using the TRAP to reveal which streams were fully received by which users, the two collectively indicate which streams were received by which users.

Accordingly, an indication of which users received which streams exists both within the *sessionTable* alone and the combination of the *sessionTable* and TRAP. | |
| | A *sessionStartTime* field is recorded by DAVIC MIB to reflect start time. Specifically, the session services group in the Service Gateway MIB stores records related to current streaming sessions which, in turn, may be related to end users. These streaming session records include a *streamEntry* record having a *sessionStartTime* field that indicates the time that the streaming session started, and thus, "the time that the user starts receiving the audio and/or visual selection." See p. 13, col. 1 ("*sessionStartTime* – time this session started or is scheduled to start"). | 103 |
| and the records that are accumulated indicate the time that a user starts receiving the audio and/or visual selection and the time that the user stops receiving the audio and/or visual selection. | The time at which a user stops listening also is indicated by DAVIC MIB. In particular, DAVIC's streams element MIB includes a TRAP that indicates a stop time for streams that are terminated prior to their natural completion. See e.g., page 112, right column ("TRAPS are used to report …changes in state of a stream such as rejections, aborted streams, and communications problems"). This alone satisfies claim 1 by indicating stop time for those streams that were prematurely terminated.

Streaming session records also include *sessionEndTime* entries that indicate stop | Furthermore, using a server logging system to record server access times was extremely well known for many years prior to the filing date of the Monteiro '187 patent. For example, the server systems described by each of Real 1.01 (April 10, 1995) and Real 2.0 (October 30, 1995) logged and time stamped user access to a server, including stream initiation times and stream disconnect times.

Moreover, a combination of DAVIC MIB with either or both of Real 1.01 and/or Real 2.0 also meets all of the claim 1 limitations, rendering claim 1 obvious. Specifically, for reasons discussed above, DAVIC MIB discloses or requires all elements of claim 1. Real 1.01 and Real 2.0 supplement or reinforce the DAVIC MIB teaching by disclosing various features such as a |

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	times for streams that were not prematurely terminated. See, e.g., p. 113, left col., ("*sessionEndTime* – time this session is due to end"). Thus, for streams not having a TRAP entry, the corresponding *sessionEndTime* entry reflects "the time that the user stops receiving the audio and/or visual selection," consistent with the claim.

And, while not required by the claim presently recited, the stop time of all streams is indicated through aggregation of the aforementioned records. Specifically, the TRAP record indicates stop times for streams for which TRAP indications exist, while the *sessionEndTime* field of *StreamEntry* indicates the stop times for all other streams.

Furthermore, using a server logging system to record server access times was extremely well known for many years prior to the filing date of the Monteiro '187 patent. For example, the server systems described by each of Real 1.01 (April 10, 1995) and Real 2.0 (October 30, 1995) logged and time stamped user access to a server, including stream initiation times and stream disconnect times.

It is for these reasons that DAVIC MIB anticipates each of the claim 1 features, rendering claim 1 invalid. | process conversion, and additional and explicit time log entries.

First, Real 1.01 and Real 2.0 also disclose converting a stream of audio/visual information into a stream of addressed digital packets. In particular, Real 1.01 discloses a software tool called the RealAudio Encoder that "puts sound files through advanced compression while preparing them for use with the RealAudio Server...." See p. 33. Similarly, Real 2.0 discloses use of a RealAudio Encoder on p. 1.

Second, Real 1.01 indicates that "every access to [the] file" is recorded in a log. See Chapter 2. In Appendix B, Real 1.01 indicates that the log format shows the client ID, as specified by a host name and/or IP address and the times at which the RealAudio server was accessed. See p. 1.

In addition, Appendix B of Real 1.01 indicates that log entries will be made "each time a new connection is completed or attempted." See page 1 in Appendix B. The skilled artisan (i.e., a network engineer or programmer) would be led and motivated by the Real 1.01 teachings of logging every access and provision of particular examples, such as attempted connections and completed connections, to log and time stamp all events related to user access, including start time and stop time.

Not surprisingly, Real 2.0 reinforces the teachings of Real 1.01 regarding logging of start and stop times. Specifically, Real 2.0 explicitly shows a log entry for a system disconnecting from the hello.ra file at 16:20:07. 16-20-07 Disconnected 12.345.67 hello.ra. [p. 73].

That is, Real 2.0 goes further in describing the sophistication of the logging tool previously mentioned in Real 1.01. For example, page 47 shows that a user accessed "gore_sta.ra" (a file presumably related to former Vice President Al Gore) on June 21, 1995. Real 2.0 indicates that "each new transaction is recorded on one line in fields...[s]ince new information is appended to the log each time a new connection is completed or attempted...." See p. 47.

Real 2.0 goes further in explaining how the log is recorded. An average UNIX administrator (e.g., not even requiring ordinary skill in the art) would |

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			recognize that the results of the monitoring could have been directed to either the screen (interactive mode) or a log file (noninteractive mode). See p. 71. In fact, Real 2.0 discloses that when the system manager is in non-interactive mode, the information is automatically appended to the end of the log every five minutes. See p. 71. Real 2.0 discloses that the difference between interactive and noninteractive mode is specifying a "-r" in the command line interface. See p. 71. Table 4-2 in Real 2.0 indicates that specifying a "u" flag from the command line interface provides a continuous display that is updated whenever a client status changes (e.g., connects or disconnects). Additionally, Real 2.0 discloses that the results of a RealAudio monitor command in interactive mode can be directed to a log, such as the monitor.txt file shown on page 74. Accordingly, each and every limitation of claim 1 is disclosed in each of the DAVIC MIB/Real 1.01 combination, the DAVIC MIB/Real 2.0 combination, and the DAVIC MIB/Real 1.01/Real 2.0 combined.
2. The method of claim 1 further comprising the step of including in at least one stream of packets at least some advertising information.	102	DAVIC MIB manages and enables, among other things, home shopping video services. See, e.g., p. 111, abstract. In enabling home shopping video services, DAVIC MIB requires an interactive video services system to provide users with packet streams including advertising information corresponding to products made available for purchase by intended audience of shopping users.	103 Claims 2, 20, and 34 also are rendered obvious by the combination of DAVIC MIB with Real 1.01. In particular, Real 1.01 discloses enabling access to a commercial radio service, namely ABC Radio. See Table 2-10 in Real 1.01. In enabling access to the commercial radio service, Real 1.01 discloses including at least some advertising information in the stream of packets. The motivation to combine presented above with respect to claim 1 is equally applicable to claims 2, 20, and 34, such that the limitations of claims 2, 20, and 34 are met by DAVIC MIB in combination with Real 1.01.
3. The method of claim 2 further comprising the step of varying the content of the advertising information with the identity of the user to whom the advertising information is provided.			103 Esch – U.S. Pat. No. 5,283,639 Esch describes a local cable system capable of inserting advertisements that are customized to the local environment of a user to whom they are delivered (e.g., a map to the local Ford dealer is provided for a user). Furthermore, Esch indicates that a content provider can precisely customize content and display it to "exact demographic audiences," and receive a single accounting use of the content. See, e.g., column 11,

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		lines 60-65. For identities associated with different demographics, advertisements that vary by demographic will necessarily vary with the "identity of the user."
4. The method of claim 2 wherein the advertising information is inserted into the stream of audio and/or visual information before such stream is converted into a stream of packets.	102 Claim 4 is anticipated by DAVIC MIB through its teaching of a home shopping channel that necessarily includes a compilation of advertisements corresponding to products made available to a viewer for purchase by a viewer. As such, the advertising information forms part of the broadcast being managed by DAVIC MIB. Moreover, the DAVIC MIB process of assembling the stream necessarily includes insertion of advertising information prior to conversion into an addressed digital packet stream, anticipating and invalidating claim 4.	A skilled artisan would be motivated to combine the interactive video system elements disclosed in the DAVIC MIB reference and the targeted advertisement insertion contemplated in Esch to meet the well-established need or desire of content providers to customize information based on interests of recipients or target users. Among other areas, this well-established need is shown by DAVIC MIB through its attempt to enable users to select their own video content (i.e., video selection) responsive to their interests. See, e.g., p. 109, abstract, which indicates support for Video On Demand services. Esch also shows this well-established need by organizing and delivering content based on user demographics reflective of the user interest. See, e.g., col. 11, lines 45-50. ("Each unique content data signal is entered into the scheduling and control system with discrete parameters—when the content can be displayed, to what demographic audience, in combination with what other content, how the content is customized by the downlink computer, and how the displaying of the content is accounted for."). 103 Claim 4 also is rendered obvious by the combination of DAVIC MIB with Real 1.01. Real 1.01 discloses enabling access to a commercial radio service, ABC Radio. See Table 2-10 in Real 1.01. As a commercial radio service, ABC Radio already includes advertising information in the stream of audio/visual information prior to conversion. The motivation to combine Real 1.01 with DAVIC MIB that was earlier presented with respect to claim 1 is equally applicable to claim 4, such that the limitations of claim 4 are met by the combination of DAVIC MIB and Real 1.01.
5. The method of claim 2 wherein the records that are accumulated indicate how many users received specific advertising information.	103 DAVIC MIB discloses information sufficient to indicate which users listened to which streams. See, e.g., p. 111, abstract, which discloses that the interactive voice services system provides a home shopping service, and, accordingly, that the video streams transmitted to the end user set top boxes necessarily include	

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	product advertisement information. See also, e.g., p. 112, ("The streams Element MIB contains several counters ... The counters record the number of streams initiated, rejected and aborted"), p. 113, left column, ("There is also a *sessionTable* which records the currently active sessions ... *sessionStreams* – identifier of the stream supporting this session"), and see, e.g., p. 113, right column ("Note: the identity of the user of this session is not included in the *sessionTable*. Rather, there is another table of clients to the video server. Each entry contains a field *sessionIndex*. Using this field, it is possible to relate users with their sessions."). It would have been obvious for that artisan to perform this step with disclosure provided in DAVIC MIB for accumulating records indicating user perception of streams that include advertising information.	
6. The method of claim 2 wherein the records that are accumulated indicate which users received specific advertising information.	102	
	Claim 6 is similar to claim 5. However, claim 6 requires accumulation of records that indicate "which" rather than "how many" users receive specific advertising information. Claims 6, 27, and 36 are anticipated by DAVIC MIB. Specifically, DAVIC MIB maintains records that reflect the time at which a stream begins and ends, which may be individually associated with a user to enable an indication of which users received specific advertising information. See also, e.g., p. 112, ("The streams Element MIB contains several counters ... The counters record the number of streams initiated, rejected and aborted"), p. 113, left column, ("There is also a *sessionTable* which records the currently active sessions ... *sessionStreams* – identifier of the stream supporting this session"), and see, e.g., p. 113, right column ("Note: the identity of the user of this session is not included in the *sessionTable*. Rather, there is another table of clients to the video server. Each entry contains a field *sessionIndex*. Using this field, it is possible to relate users with their sessions.").

Moreover, DAVIC MIB contemplates delivery of home shopping content, which necessarily includes a compilation of advertising corresponding to products made available to a viewer for purchase. By maintaining records reflecting delivery of those streams and indicating *sessionStartTime* and *sessionEndTime* for each, the DAVIC MIB records can be used to deduce which users received which advertising information, such that they necessarily indicate such information. | |
| 7. The method of claim 1 further comprising the step of generating an audio output and/or a visual display from the stream of packets received by the user. | 102 | 103 |
| | Claims 7 and 39 are anticipated by DAVIC MIB. DAVIC MIB describes management of a video system, such as a video on demand (VOD) system. See, e.g., p. 109 ("A video server system provides many different types of interactive video services including: video on demand ..."). Inherent within a VOD system is the generation of audio and/or video display for a user based on delivered pay-per-view content streams. | Claims 7 and 39 also are rendered obvious by the combination of DAVIC MIB with either or both of Real 1.01 and Real 2.0. In particular, Real 1.01 and Real 2.0 both disclose rendering audio streams transmitted to the user. See Real 1.01, Ch. 1, p. 1 ("the RealAudio Player lets you listen to audio files"); see also Real 2.0, p.1 describing use of RealAudio Player to listen to audio files. The motivation to combine presented above with respect to claim 1 is |

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		equally applicable to claims 7 and 39, such that the limitations of claims 7 and 39 are met by DAVIC MIB in combination with either or both of Real 1.01 and Real 2.0.
8. The method of claim 1 further comprising the steps of:		103
storing a first stream of packets received by the user at a first time		Aras – U.S. Patent No. 5,872,588
and at a later time, inserting the first stream of packets into a second stream of packets received at the user.		'While Aras generally informs a process for inserting content at the server nodes, it provides one implementation in which insertion/modification of stream content is performed at the user. With reference to Fig. 15, a monitor 1555 residing at the user is said to access upstream content and to modify the AVM Audio Visual Media. Because the AVM includes content in advertising, user-side insertion is clearly contemplated and taught.[2] Moreover, Aras discloses an interactive TV system in which a monitor 1555 of a home station is configured to modify an incoming AVM stream (second stream) by injecting messages into the incoming AVM stream. See, e.g., column 25, lines 14-16. ("The monitor may in some instances modify the AVM to be presented to the subscriber. This may entail injecting messages for the subscriber or modifying the AVM itself such as for screening purposes."). Specifically, Aras contemplates injection of commercial messages as AVM streams into a program AVM stream received by a subscriber. See col. 8, lines 53-65, which indicates that commercials may be injected. ("The time index field may also be useful when commercials are encoded as separate AVMs. For example, if the AVM presented to the subscriber is a TV drama the TV drama would have a unique audio-visual identifier (AVI) .... If commercials or other AVMs are injected into the broadcast of the TV drama and the commercials have separate See audio/visual indicators] AVIs the sequentially received AVI information at the home station could look as shown in Table IV. ...."). Accordingly, the commercial AVM is injected into the program AVM by the monitor on the set top box and, thus, is necessarily

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[1] MIB contemplates the use of home shopping applications, and Aras deals with incorporation of advertisement audio visual materials in program audio visual materials.

[2] The AVM being modified by the user monitor 1555 "includes content and advertising."

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		stored, at least temporarily, at the monitor prior to the injection operation. For these reasons, Aras teaches the claimed process of storing a first stream of packets (i.e., the commercial AVM) by the user at a first time and subsequently inserting the first stream of packets into a second stream of packets (i.e., the program AVM) received at the user.
9. The method of claim 8 further comprising the step of converting the combined first and second streams of packets into an audio output and/or visual display.		103

The decode and presentation function 1561 of Aras converts the AVM stream into an audio output for speakers 1561 and/or video display for display 1563 at the home station 11. (See column 25, lines 1-6). Accordingly, the teachings of Aras, combined with those of DAVIC MIB for the reasons disclosed above with respect to claim 8, meets each element of claim 9, rendering claim 9 invalid. |
| 10. The method of claim 8 wherein the first stream of packets contains advertising information. | | 103

Aras discloses that commercial streams may be injected into an AVM stream. See, e.g., column 8, lines 53-65, which indicates that commercials may be injected. ("The time index field may also be useful when commercials are encoded as separate AVMs. For example, if the AVM presented to the subscriber is a TV drama the TV drama would have a unique audio-visual identifier (AVI) ... If commercials or other AVMs are injected into the broadcast of the TV drama and the commercials have separate AVIs the sequentially received AVI information at the home station could look as shown in Table IV. ...").

See claim 8 for motivation of combination. |
| 11. The method of claim 8 wherein the content of the advertising information is varied depending on the identity of the user. | | 103

The commercial AVM that is injected by Aras into a program AVM may "be targeted to very specific customer sets" and may be varied based on the characteristics or demographics of the user. See, e.g., column 26, lines 52-61, also see, e.g., column 26, line 53, ("Using information collected at the BCCs, [See Behavior Collection Centers] advertisement effectiveness, targeting and demographics can be determined with excellent granularity. Advertisers can determine how many home stations were tuned in to |

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12. The method of claim 1 wherein at least one stream of packets comprises copyrighted music selections and	102 Claim 12 is anticipated by DAVIC MIB. With respect to the first limitation, DAVIC MIB provides accounting of the resources used for billing and other purposes. See, e.g., p. 109, right col. ("Accounting Management"). The underlying video content being distributed and accounted for using DAVIC MIB is copyrighted under common law. For example, in providing "video" on demand content, a copyrighted video or music component is necessarily included in the stream.	103 Claims 12 and 23 are rendered obvious by DAVIC MIB with either or both of Real 1.01 and Real 2.0. In particular, Real 1.01 discloses providing copyrighted audio content from two of Real Networks content partners, ABC News and National Public Radio in Fig. 2-4. Appendix B proceeds to indicate that the RealAudio Server Log may be used to determine "how many clients have connected to your server…[and] the clips they listened to." In doing so, Real 1.01 discloses how many users listened to the copyrighted music selections. Real 2.0 also discloses this functionality. Specifically, Real 2.0 discloses that a "Files" window has a "Total" parameter with "the total number of connections made to this file since the System manager was started. See p. 68. The motivations to combine presented above with respect to claim 1 are equally applicable to claims 12 and 23, such that the limitations of claims 12 and 23 are met by DAVIC MIB in combination with either or both of Real 1.01 and Real 2.0.
		their particular advertisements."). Accordingly, this limitation is met by the combination of DAVIC MIB and Aras, which is motivated as indicated with respect to claim 8.
the records that are accumulated indicate how many users received specific music selections.	As for the second limitation, the Stream Element MIB described by DAVIC MIB uses counters to record the number of streams "initiated, rejected, or aborted," thereby indicating the number of users receiving specific music selections. See p. 112, right col. ("Stream Element MIB").	
13. The method of claim 1 wherein at least one stream of packets comprises music selections and	102 and 103 See claim 47 of the '187 patent.	
the records that are accumulated indicate how many users did or did not listen to the entire selection.		
14. The method of claim 1 further comprising the steps of:	102	
compressing the stream of packets in their passage from source to user, and	As for the first compressing limitation, the server architecture disclosed in DAVIC MIB describes delivering MPEG streams to end user set top boxes. See p. 111, left col. ("The Digital Audio Visual Council (DAVIC) server architecture consists of several logical elements. … The elements are linked to set top boxes via interfaces into the delivery network. …Also, there are interfaces into the high speed delivery network for communicating MPEG	

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decompressing the stream of packets near the user.	streams. The interfaces used by the STBs [set top boxes] are referred as S3, S4 (for control) and S1 and S2 (for user requests and video stream)"). Clearly, through the act of delivering MPEG streams, the notion of applying the MPEG compression algorithm prior to delivery (i.e., compression in their passage) is contemplated and conveyed. The decompressing limitation also is contemplated by DAVIC MIB. To the extent that "near the user" is decompressing at the user's computer in accordance with the '187 specification, this limitation is described by DAVIC MIB. Specifically, DAVIC MIB's end user set top boxes necessarily perform decompression of the received MPEG stream of packets to enable perception of the communicated audio/visual content by the user. For at least these reasons, claims 14 and 25 are invalid.	103 The combination of DAVIC MIB and either or both of Real 1.01 and Real 2.0 disclose compressing near the converting means and decompressing near the user in describing an server-to-client communications system that distributes compressed content across the Internet. In particular, Real 1.01 discloses a software tool called the RealAudio Encoder that "puts sound files through advanced compression while preparing them for use with the RealAudio Server...." See p. 33. The RealAudio player then renders content. See p. 1 (describing that the RealAudio player "lets you listen to audio files"). The motivations described above with respect to claim 1 for combining DAVIC MIB and Real 1.01 and/or Real 2.0 are equally applicable to claims 14, 25, 43, and 44.
15. The method of claim 14 wherein the compressing step uses a compression algorithm that is selected in accordance with the content of the information being communicated in the stream of packets.	102 DAVIC MIB contemplates the notion of using an MPEG compression algorithm for the streams communicated to the end user set top boxes. A skilled artisan would have found it obvious that the MPEG compression algorithm was selected in accordance with the content of the information (i.e., video content) communicated to the end user set top boxes in the stream of packets. See page 115, col. 2. In contrast, for example, if only still images were being sent by the DAVIC system, JPEG compression may have been selected instead of MPEG compression.	103 During prosecution before the Patent Office, originally-filed claim 14 was rejected, even though it recited the limitation presently at issue in claim 15, namely using "a compression algorithm selected in accordance with its type." During prosecution, the Examiner reasoned as follows: It is known to compress information at the source and decompress it at the destination, selecting the compression algorithm in accordance with the content of the information. It would have been obvious to a person having an ordinary level of skill in the art at the time the invention was made... to include these features since they allow for transmission of data at a faster rate using less memory storage space and selection of the compression algorithm ensures a reliable reception with little loss of quality and minimum degradation. [Office Action dated July 15, 1997 at 4.] Applicant acquiesced by amending, rather than challenging this assertion.

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	Inasmuch as features added by claims 15, 26, and 45 are found in DAVIC MIB and since the rejection to claims reciting similar features were never addressed before the Patent Office during prosecution, each limitation of claims 15, 26, and 45 is anticipated or at least rendered obvious by DAVIC MIB, such that claims 15, 26, and 45 are invalid.	
16. The method of claim 15 wherein the compressing step inserts into each packet an identification of the compression algorithm used and	103	Real 1.01 and Real 2.0 both describe a compressing step performed by the RealAudio Server to insert a port number into the header of the UDP packet, necessarily identifying the compression algorithm used as RealAudio compression (i.e., the RealAudio compression algorithm is used only for outgoing UDP packets that have in their header a port number between 6970 and 7170). See Real 1.01 Appendix C, Firewalls, page 1. The user/client system reads the header of the incoming UDP packets to identify the ports specified. The port number enables the user/client system to know whether to decompress the information using the RealAudio Player decompression algorithm (if the port number is between 6970 and 7170) or, alternatively, to decompress it using some other decompression algorithm (if the port number is not between 6970 and 7170). See, e.g., Real 1.01 Appendix C, Firewalls, p. 1.
the decompressing step monitors each packet to read such identification and to vary its decompression algorithm in response thereto.		
17. The method of claim 1 wherein at least one stream of packets comprises copyrighted music selections and the records that are accumulated indicate which users received specific music selections.	102	Substantively, the differences between claims 17, 31, and 37 and independent claims 1, 19, and 33 are the same as the differences between claim 12 and claim 1, with the exception that claim 12 requires records to indicate "how many users received specific music selections" rather than "which users received specific music selections." DAVIC MIB anticipates this limitation for the reasons disclosed above with respect to claim 12. Notably, the *session Table* of DAVIC MIB includes entries that relate a stream to a session that may be associated with an individual end user via a client table. See p. 113, left and right columns. For at least that reason, the arguments presented above with respect to claim 12 are equally applicable to claim 17, such that the limitations of claim 17 are met by DAVIC MIB for the reasons explained with respect to claim 12.
	103	As was discussed in claims 12 and 23, Real 1.01 discloses enabling access to copyrighted music selections and tracking which users accessed which files. See Fig. 2-4 (showing access to copyrighted National Public Radio and ABC Radio); see also Appendix B (indicating that the RealAudio Server Log may be used to determine "how many clients have connected to your server…[and] the clips they listened to."). Real 2.0 discloses the same functionality with a "Files" window. See p. 68 (a "Total" parameter tracks "the total number of connections made to this file since the System manager was started). The motivations to

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Claims for U.S. Patent No. 5,778,187 filed May 9, 1996	A DAVIC MIB for Video System Management	Other References
18. The method of claim 1 further comprising the steps of:		
storing a first stream of packets received by the user at a first time and		103 Aras shows storage of an advertisement at the user, per the reasoning discussed above with respect to claim 8 of the '187 patent. It would have been obvious for an artisan to perform this step based on the DAVIC MIB/Aras combination, as this combination discloses storage of a commercial message at the user as discussed above with respect to claim 8.
inserting the first stream of packets into a plurality of streams of packets received at the user at a plurality of later times.		
19. A method for transmitting at least one stream of audio and/or visual information over a communications network to a plurality of users comprising the steps of:	102 and 103 Claim 19 is similar to claim 1. Claim 19 differs from claim 1 in that claim 19 does not include limitations for 1) converting the A/V information into a stream of addressed digital packets complying with a network communications protocol; and 2) routing the stream to a user. Claim 19 is invalid for the same reasons that claim 1 is invalid.	
(a) controlling the routing of the stream of information through the network in response to selection signals received from the users, and		
(b) monitoring the reception of the stream of information by the users and accumulating records relating to the reception of the stream of information by the users		
wherein at least one stream of information comprises an audio and/or visual selection and the records that are accumulated indicate the time that a user starts receiving the audio and/or visual selection and the time that the user stops receiving the audio and/or visual selection.		
20. The method of claim 19 further	102 and 103	

combine presented above with respect to claim 1 is equally applicable to claims 17, 31, and 37, such that the limitations of claim 17, 31, and 37 also are met by the combination of DAVIC MIB and either or both of Real 1.01 and Real 2.0.

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Claims for U.S. Patent No. 5,778,187 filed May 9, 1996	A DAVIC MIB for Video System Management	Other References
comprising the step of including in at least one stream of information at least some advertising information.	See claim 2 of the '187 patent.	
21. The method of claim 20 further comprising the step of varying the content of the advertising information with the identity of the user to whom the advertising information is provided.		103 See claim 3 of the '187 patent.
22. The method of claim 20 wherein the records that are accumulated indicate how many users received specific advertising information.	102 and 103	
23. The method of claim 20 wherein at least one stream of information comprises copyrighted music selections and the records that are accumulated indicate how many users received specific music selections.	102 and 103 See claim 12 of the '187 patent.	103 See claim 5 of the '187 patent.
24. The method of claim 20 wherein at least one stream of information comprises music selections and the records that are accumulated indicate how many users did or did not listen to the entire selection.	102 and 103 See claim 13 of the '187 patent.	
25. The method of claim 20 further comprising the steps of: compressing the stream of information in its passage from source to user, and decompressing the stream of information near the user.	102 and 103 See claim 14 of the '187 patent.	
26. The method of claim 25 wherein the compressing step uses a compression algorithm that is selected in accordance with the content of the information being communicated in the stream of information.	102 and 103 102 See claim 15 of the '187 patent.	
27. The method of claim 20 wherein the records that are accumulated indicate which users received specific advertising information.	102 See claim 6 of the '187 patent.	
28. The method of claim 19 further comprising the steps of: (a) storing a first stream of	103 See claim 8 of the '187 patent.	103

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Claims for U.S. Patent No. 5,778,187 filed May 9, 1996	A DAVIC MIB for Video System Management	Other References
information *received by the user* at a first time and		
(b) at a later time, inserting the first stream of information into a second stream of information received by the user.	103	
29. The method of claim 28 wherein the first stream of information contains advertising information.	See claim 10 of the '187 patent.	
30. The method of claim 19 wherein multiple streams of audio and/or visual information are transmitted over the communications network and the user can select which stream to receive.	102 DAVIC MIB indicates utility in managing and enabling, among other things, multiple services including VOD, Near VOD, and broadcast applications. Each of these services is supported by video streams that are transmitted over the communications network. A user is able to select a service or, alternatively, a video offered by a service and, by doing so, effectively selects to receive a stream from among a set of multiple other streams. See p. 111, col. 1.	103 A Real 1.01 and Real 2.0 both disclose enabling a user to access one of multiple streams. See Real 1.01, Chap. 3 (showing how user links may be presented in a web page); see also Fig. 2-4 (showing users accessing different content selections). Real 2.0 discloses the same functionality with a "Files" window. See Real 2.0, p. 68 (a "Total" parameter tracks "the total number of connections made to this file since the System manager was started"). The motivations to combine presented above with respect to claim 1 are equally applicable to claim 30, such that the limitations of claim 30 are met by the combination of DAVIC MIB and either or both of Real 1.01 and Real 2.0.
31. The method of claim 19 wherein	102 and 103	
at least one stream of information comprises copyrighted music selections	See claim 17 of the '187 patent.	
and the records that are accumulated indicate which users received specific music selections.		
32. The method of claim 19 further comprising the steps of:		103
storing a first stream of information received by the user at a first time and		See claim 18 of the '187 patent.
inserting the first stream of information into a plurality of streams of information received at the user at a plurality of later times.		
33. A communication system comprising:	102 and 103	See claim 1 of the '187 patent. Claim 33 is a system claim that uses the format

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Claims for U.S. Patent No. 5,778,187 filed May 9, 1996	A DAVIC MIB for Video System Management	Other References
means for converting at least one stream of audio and/or visual information into a stream of addressed digital packets complying with the specifications of a network communication protocol,	associated with 35 U.S.C. 112 P6 (means plus function).	
means for routing such stream via a communication network to selected users,		
means for controlling the routing of the stream of packets in response to selection signals received from the users, and means for monitoring the reception of packets by the user and for accumulating records that indicate which streams of packets were received by which users, wherein at least one stream of packets comprises an audio and/or visual selection, and the		
means for monitoring further includes means for accumulating records that indicate the time that a user starts receiving the audio and/or visual selection and the time that the user stops receiving the audio and/or visual selection.		
34. The communication system of claim 33 further comprising means for including in the stream of packets at least some advertising information.	102 and 103	
35. The communication system of claim 34 further comprising means for varying the content of the advertising information with the identity of the user to whom the advertising information is provided.	See claim 2 of the '187 patent.	103 See claim 3 of the '187 patent.
36. The communication system of claim 34 wherein the means for monitoring further accumulates records that indicate which users received specific advertising information.	102 and 103	
37. The communication system of claim 33 wherein at least one stream of packets comprises copyrighted music selections and the means for monitoring further	See claim 6 of the '187 patent.	102 and 103 See claim 17 of the '187 patent.

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Claims for U.S. Patent No. 5,778,187 filed May 9, 1996	A DAVIC MIB for Video System Management	Other References
accumulates records that indicate which users received specific music selections.		
38. The method of claim 33 further comprising means for storing packets received at the user during a first time period and		103
means for inserting such packets into other packets received at the user at a plurality of later time periods.		See claim 18 of the '187 patent.
39. The communication system of claim 33 further comprising means for generating from the stream of packets received at the user an audio output and/or a visual display.	102 and 103	See claim 7 of the '187 patent.
40. The communication system of claim 33 further comprising means for storing packets received at the user during a first time period and		103
means for inserting such packets into other packets received at the user at a later time period.		See claim 8 of the '187 patent.
41. The communication system of claim 40 wherein the stream of packets received during the first time period contains advertising information.		See claim 10 of the '187 patent.
42. The communication system of claim 41 wherein the content of the advertising information is varied depending on the identity of the user.		103
43. The communication system of claim 33 further comprising:	102 and 103	See claim 11 of the '187 patent.
means for compressing the stream of packets in their passage from source to user, and	See claim 14 of the '187 patent.	

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Claims for U.S. Patent No. 5,778,187 filed May 9, 1996	A DAVIC MIB for Video System Management	Other References
downstream of the compressing means, means for decompressing the stream of packets.		
44. The communication system of claim 43 wherein the compressing means is located near the converting means and	102 and 103	
the decompressing means is located at the user.	See claim 14 of the '187 patent. Claim 44 adds the additional limitation that the compressing means is located "near the converting means" and the decompressing means is located "at the user." As discussed previously with respect to claim 1, a digital packet conversion process is inherent to the interactive video services system contemplated by the DAVIC MIB reference, as the video services system could not be used to deliver non-digital content without such a conversion. It would have been obvious to a skilled artisan to locate the compression means of the system near or at the converting means so as to minimize the bandwidth inefficiency of transporting uncompressed video data over a network. The limitation that the decompressing means is located "at the user" is construed to mean that the decompressing means is located at the user's computer for the reasons discussed in reference to claim 14 of the '187 patent. Therefore, this limitation is described by the DAVIC MIB reference. Specifically, DAVIC's end user set top boxes necessarily perform decompression of the MPEG stream of packets to enable perception of the communicated audio visual content by the user.	
45. The communication system of claim 43 wherein the compressing means uses a compression algorithm that is selected in accordance with the content of the information being communicated in the stream of packets.	102 and 103 See claim 15 of the '187 patent	103
46. The communication system of claim 43 wherein the compressing means inserts into each packet an identification of the compression algorithm used and the decompressing means monitors each packet to read such identification and to vary its decompression algorithm in response thereto.	See claim 16 of the '187 patent.	103
47. A method for transmitting message packets over a communications network comprising the steps of:	102 Most of the claim 47 limitations are identical to those of claim 1, and hence, addressed with reference to the earlier discussion of claim 1 to avoid redundancy. However, claim 47 differs from claim 1 by the following concepts: (1) the stream of packets "comprises music selections"; and (2) the accumulating records indicate how many users did or did not listen to the	Real 1.01 and Real 2.0 both indicate that the concept of logging of stop time indications existed prior to DAVIC MIB. Real 1.01 and Real 2.0 also disclose generating "records that are accumulated indicate how many users did or did not listen to the entire selection." 103

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Claims for U.S. Patent No. 5,778,187 filed May 9, 1996	A DAVIC MIB for Video System Management	Other References
	entire selection.	Real 1.01 discloses start time and stop time; and, much as these start times and stop times are combined by the '187 patent specification to disclose how many users listened to an entire selection, so too are the start time/stop time values (including those appearing in an error) of Real 1.01 and Real 2.0 used to determine how many users listened to the entire selection. See Real 1.01, Appendix B, p. 1. The motivation described with respect to claim 1 for combining DAVIC MIB with Real 1.01/Real 2.0 is equally applicable to claims 47 and 48.
	As for the first limitation, DAVIC MIB discloses streaming music selections by suggesting a video on demand (VOD) application. Specifically, DAVID MIB describes management of an interactive video services system that provides interactive video services as digitized packets over a delivery network in response to user requests. The interactive video services are described as including VOD. See, e.g., p. 109, abstract and p. 110, left col. ("Service Management"). In a VOD system, a user is provided with several music or video content selection options for their choosing (to effect the "demand"), which content is at least common law copyrighted. Through disclosure of a video service system that provides copyrighted video on demand, DAVIC MIB clearly contemplates a video stream that includes a copyrighted music component or selection.	
	As for the second limitation, DAVIC MIB accumulates records that individually and collectively indicate how many users did or did not listen to the entire selection. DAVIC MIB describes counters within a Stream Element MIB of the video server that are used to record the number of streams "initiated, rejected, or aborted." See, e.g., p. 112, right col. ("Stream Element MIB"). By counting the number of streams rejected or aborted, DAVIC MIB describes records that indicate how many users did not listen to the entire selection. That is, the number of streams rejected or aborted, DAVIC MIB describes records that indicate how many users did not listen to the entire selection. That is, the aborted and rejected counters indicate how many users did not listen to an entire selection since they may be used to deduce such a metric (e.g., total terminations = rejected + aborted). Moreover, by additionally counting the number of streams initiated, DAVIC MIB also describes an accumulation of records that collectively may be used to compute (and that therefore necessarily "indicate") how many users did receive the entire stream and, thus, did listen to the entire selection. That is, these counters indicate how many users listen to the entire selection since they may be used to deduce such a metric (e.g., entire = initiated – rejected – aborted).	
converting a plurality of streams of audio and/or visual information into a plurality of streams of addressed	Furthermore, DAVIC MIB describes TRAPs and streaming session records that together could be used to deduce and thus indicate which, and thus how many, users did and did not listen to the entire selection. In particular, TRAPs report streams not fully received by an end user, thus indicating users that did not receive or "listen" to the entire selection. To the extent that a TRAP does not exist, reception of a stream may be inferred, such that the *sessionTable* of the DAVIC server provides a record of users that did "listen" to the entire selection. See, e.g., p. 113, left col. ("There is also a *sessionTable* which records the currently active sessions .... *sessionStreams* – identifier of the stream supporting this session") and see, e.g., p. 113, right column ("Note: the identity of the user of this session is not included in the *sessionTable*. Rather, there is another table of clients to the video server. Each entry contains a field *sessionIndex*. Using this field, it is possible to relate users with their sessions.").	

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Claim Charts for U.S. Patent Nos. 5,778,187, 5,983,005, and 6,434,622

Claims for U.S. Patent No. 5,778,187 filed May 9, 1996	A DAVIC MIB for Video System Management	Other References
digital packets complying with the specifications of a network communication protocol,		
for each stream, routing such stream to one or more users,		
controlling the routing of the stream of packets in response to selection signals received from the users, and		
monitoring the reception of packets by the users and accumulating records that indicate which streams of packets were received by which users,		
wherein at least one stream of packets comprises music selections		
and the records that are accumulated indicate how many users did or did not listen to the entire selection.		
48. A method for transmitting at least one stream of audio and/or visual information over a communications network to a plurality of users comprising the steps of:	102 and 103	Most of the claim 48 limitations are addressed with respect to the earlier discussion of claim 19. Furthermore, claim 48 adds the same limitations that distinguished claim 47 from claim 1. For that reason, the arguments presented above with respect to claims 19 and 47 are equally applicable to claim 48, such that the limitations of claim 48 are met by DAVIC MIB alone and also in combination with either or both of Real 1.01 and Real 2.0 for the reasons explained with respect to claims 19 and 47.
controlling the routing of the stream of information through the network in response to selection signals received from the users, and		
monitoring the reception of the stream of information by the users and accumulating records relating to the reception of the stream of information by the users, and		
wherein at least one stream of information comprises music selections		
the records that are accumulated indicate how many users did or did not listen to the entire selection.		
49. A method for transmitting message packets over a communications network comprising the steps of:	102 and 103	All of the claim 50 limitations are addressed with respect to the earlier discussion of claim 19. In particular, the underlined portions of claim 50 that distinguish claim 19 add the limitations that were used to distinguish claim 49

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Claims for U.S. Patent No. 5,778,187 filed May 9, 1996	A DAVIC MIB for Video System Management	Other References
converting a plurality of streams of audio and/or visual information into a plurality of streams of addressed digital packets complying with the specifications of a network communication protocol,	from claim 1. For that reason, the arguments presented above with respect to claims 19 and 49 are equally applicable to claim 50, such that the limitations of claim 50 are met by DAVIC MIB for the reasons explained with respect to claims 19 and 49.	
for each stream, routing such stream to one or more users,		
controlling the routing of the stream of packets in response to selection signals received from the users, and		
monitoring the reception of packets by the users and accumulating records that indicate which streams of packets were received by which users,		
wherein at least one stream of packets comprises an audio and/or visual selection and		
the records that are accumulated indicate the elapsed time that a user received the audio and/or visual selection.		
50. A method for transmitting at least one stream of audio and/or visual information over a communications network to a plurality of users comprising the steps of:	Claim 50 is similar to claim 19 with the elapsed time limitation of claim 49. Claim 50 is invalid for the same reasons that claims 19 and 49 are invalid.	102 and 103
(a) controlling the routing of the stream of information through the network in response to selection signals received from the users, and		
(b) monitoring the reception of the stream of information by the users and accumulating records relating to the reception of the stream of information by the users,		
wherein at least one stream of information comprises an audio and/or visual selection and the records that are accumulated indicate the elapsed time that a user received the audio and/or visual selection.		
51. A communication system comprising:		102 and 103

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Claims for U.S. Patent No. 5,778,187 filed May 9, 1996	A DAVIC MIB for Video System Management	Other References
means for converting at least one stream of audio and/or visual information into a stream of addressed digital packets complying with the specifications of a network communication protocol,	Claim 51 is invalid for the same reason that claim 50 is invalid. Claim 51 is similar to claim 50 except that claim 51 is a system claim (Means plus function).	
means for routing such stream via a communication network to selected users,		
means for controlling the routing of the stream of packets in response to selection signals received from the users, and		
means for monitoring the reception of packets by the user and for accumulating records that indicate which streams of packets were received by which users,		
wherein at least one stream of packets comprises an audio and/or visual selection,		
and the means for monitoring further includes means for accumulating records that indicate the elapsed time that a user received the audio and/or visual selection.		

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Claims for U.S. Patent No. 5,983,005 filed July 6, 1998 (claiming priority to U.S. Patent No. 5,778,187 filed May 9, 1996)	A DAVIC MIB for Video System Management	Other References
1. A method for transmitting message packets over a communications network comprising the steps of:	102 and 103	
converting at least one stream of audio and/or visual information into at least one stream of addressed digital packets complying with the specifications of a network communication protocol,	All of the substantive limitations of claims 1, 25, and 44 were addressed previously with respect to the earlier-provided discussion of claim 1 of the '187 patent. Accordingly, for reasons articulated with respect to claim 1 of the '187 patent, the limitations of claims 1, 25, and 44 are met, such that a finding of invalidity is proper.	
for each stream, routing such stream to one or more users,		
controlling the routing of the stream of packets in response to selection signals received from the users, and		
monitoring the reception of packets by the users and accumulating records that indicate which streams of packets ware received by which users, wherein at least one stream of packets comprises an audio and/or visual selection and the records that are accumulated indicate the time that a user starts receiving the audio and/or visual selection.		
2. The method of claim 1 further comprising the stop of varying the information content of at least one stream of packets with the identity of the user to whom the at least one stream of packets are delivered.		103
3. The method of claim 2 wherein the	103	Claims 2, 23, 26, 33, 45, and 63 include all of the limitations of claim 3 of the '187 patent with the exception that claims 2, 23, 26, 33, 45, and 63 are broader in that they omit the stop time limitation and in that they require variation of information content rather than variation of advertising information, which is subsumed by information content. Thus, the substantive limitations found in claims 2, 23, 26, 33, 45, and 63 were addressed previously with respect to the earlier-provided discussion of claim 3 of the '187 patent. Moreover, for the reasons articulated with respect to claim 3, the limitations of claims 2, 23, 26, 33, 45, and 63 are either lacking enabling disclosure or met by the combination of DAVIC MIB and Esch, such that a finding of invalidity is proper.

Claim Charts for U.S. Patent Nos. 5,778,187, 5,983,005, and 6,434,622

Claims for U.S. Patent No. 5,983,005 filed July 6, 1998 (claiming priority to U.S. Patent No. 5,778,187 filed May 9, 1996)	A DAVIC MIB for Video System Management	Other References
varied information content is inserted into the stream of audio and/or visual information before such stream is converted into a stream of packets.		See claim 4 of the '187 patent. Claims 3, 27, and 46 include a limitation introduced in claim 4 of the '187 patent. However, claims 3, 27, and 46 are broader than claim 4 of the '187 patent in that they omit the stop time limitation and in that they require insertion of information content rather than requiring insertion of advertising information which is subsumed by information content. Thus, the substantive limitations found in claims 3, 27, and 46 were addressed previously with respect to the earlier-provided discussion of claim 4 of the '187 patent. Moreover, for the reasons articulated with respect to claim 4 of the '187 patent, the limitations of claims 3, 27, and 46 are rendered obvious by the combination of DAVIC MIB and Real 1.01, such that a finding of invalidity is proper.
4. The method of claim 2 wherein the varied information contains advertising information.		103 Claims 4 and 47 include all of the limitations of claim 3 of the '187 patent with the exception that claims 4 and 47 are broader in that they omit the stop time limitation. Thus, the substantive limitations found in claims 4 and 47 were addressed previously with respect to the earlier-provided discussion of claim 3 of the '187 patent. Moreover, for the reasons articulated with respect to claim 3 of the '187 patent, the limitations of claims 4 and 47 are rendered obvious by the combination of DAVIC MIB and Esch, such that a finding of invalidity is proper.
5. The method of claim 4 wherein the records that are accumulated indicate how many users received specific advertising information.	102 and 103	Claims 5 and 41 include the limitations introduced in claim 5 of the '187 patent. Thus, the substantive limitations found in claims 5 and 41 were addressed previously with respect to the earlier-provided discussions of claim 5 of the '187 patent. Moreover, for the reasons articulated with respect to claim 5 of the '187 patent, the limitations of claim 5 are anticipated or at least rendered obvious by DAVIC MIB, such that a finding of invalidity is proper.

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Claim Charts for U.S. Patent Nos. 5,778,187, 5,983,005, and 6,434,622

Claims for U.S. Patent No. 5,983,005 filed July 6, 1998 (claiming priority to U.S. Patent No. 5,778,187 filed May 9, 1996)	A DAVIC MIB for Video System Management	Other References
6. The method of claim 1 further comprising the step of generating an audio output and/or a visual display from the stream of packets received by the user.	102 and 103	
7. The method of claim 1 further comprising the steps of:	Claims 6 and 48 include all of the limitations of claim 7 of the '187 patent with the exception that claims 6 and 48 are broader in that they omit the stop time limitation. Thus, the substantive limitations found in claims 6 and 48 were addressed previously with respect to the earlier-provided discussion of claim 7 of the '187 patent. Moreover, for the reasons articulated with respect to claim 7 of the '187 patent, the limitations of claims 6 and 48 are met by DAVIC MIB alone and also rendered obvious by the combination of DAVIC MIB with either or both of Real 1.01 and Real 2.0, such that a finding of invalidity is proper.	
storing a first stream of packets received by the user at a first time and		Claims 7 and 49 include all of the limitations of claim 8 of the '187 patent with the exception that claims 7 and 49 are broader in that they omit the stop time limitation. Thus, the substantive limitations found in claims 7 and 49 were addressed previously with respect to the earlier-provided discussion of claim 8 of the '187 patent. Moreover, for the reasons articulated with respect to claim 8 of the '187 patent, the limitations of claims 7 and 49.
at a later time, inserting the first stream of packets into a second stream of packets received by the user.		103
8. The method of claim 7 wherein the content of the first stream of packets is varied depending on the identity of the users to whom the first stream of packets are delivered.		Claims 8 and 32 include all of the limitations of claim 11 of the '187 patent with the exception that claims 8 and 32 omit the stop time limitation and in that they require variation of the first stream content based on the identity of multiple recipients rather than based on the identity of a single recipient. Nevertheless, the earlier-provided discussion of claim 11 of the '187 patent is applicable to claims 8 and 32 since Aras describes customizing per demographic (i.e., collection of multiple users). See e.g., column 26, lines 44-61. Thus, the substantive limitations found in claims 8 and 32 were addressed previously with respect to the earlier-provided discussions of claim 11 of the '187 patent. Moreover, for the reasons articulated with respect to claim 11 of the '187 patent, the limitations of claims 8 and 32 are rendered obvious by the combination of DAVIC MIB and Aras, such that a finding of

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Claims for U.S. Patent No. 5,983,005 filed July 6, 1998 (claiming priority to U.S. Patent No. 5,778,187 filed May 9, 1996)	A DAVIC MIB for Video System Management	Other References
9. The method of claim 7 further comprising the step of converting the combined first and second streams of packets into an audio output and/or visual display.	103	invalidity is proper. 103 Claim 9 includes all of the limitations of claim 9 of the '187 patent with the exception that claim 9 is broader in that it omits the stop time limitation. Thus, the substantive limitations found in claim 9 were addressed previously with respect to the earlier-provided discussions of claim 9 of the '187 patent. Moreover, for the reasons articulated with respect to claims 9 of the '187 patent, the limitations of claim 9 are met by the combination of DAVIC MIB and Aras, such that a finding of invalidity is proper.
10. The method of claim 7 wherein the content of the first stream of packets is varied depending on the identity of the user.	103 See claim 8 of the '005 patent.	103
11. The method of claim 10 wherein the first stream of packets contains advertising information.		103 Claims 11, 29, and 51 add the limitation of claim 10 of the '187 patent to each of claims 10, 28, and 50, respectively, thus resembling claim 10 of '187 patent without the stop time limitation. Thus, the substantive limitations found in claims 11, 29, and 51 were addressed previously with respect to the earlier-provided discussions of claims 10, 28, and 50, and claim 10 of the '187 patent. Moreover, for the reasons articulated with respect to claims 10, 28, and 50 and claim 10 of the '187 patent, the limitations of claims 11, 29, and 50 are met by the combination of DAVIC MIB and Aras, such that a finding of invalidity is proper.
12. The method of claim 1 further comprising the steps of: storing a first stream of packets at an intermediate point in the distribution architecture at a first time and		103 Claims 12 and 52 are invalid for being rendered obvious by the combination of DAVIC MIB and Aras. As discussed previously with respect to claim 8 of the '187 patent, Aras contemplates an interactive television system that allows for injection of commercial AVMs or streams into program AVMs or streams. Specifically, Aras

Claim Charts for U.S. Patent Nos. 5,778,187, 5,983,005, and 6,434,622

Claims for U.S. Patent No. 5,983,005 filed July 6, 1998 (claiming priority to U.S. Patent No. 5,778,187 filed May 9, 1996)	A DAVIC MIB for Video System Management	Other References
		contemplates the notion of targeting injected advertisements by geography. See, e.g., column 12, line 66 to column 13, line 6, ("The information collected and processed at the DN 107 might be of particular interest to the DN 107 and local business operating in the geographic area serviced by the distribution node. This permits very effective targeting of subscribers by commercial advertisements. The present invention permits determination of the effectiveness of the ability to customize and inject personalized advertisements into AVMs."). Furthermore, Aras contemplates performing such injection of ads at a device remote from the server. For example, Aras indicates that the user device may be used for this purpose. Based on the teachings of Aras, and having a general understanding of caching concepts well established in 1995, the ordinary artisan would find it obvious to store commercial AVMs or streams in intermediary distribution nodes for subsequent injection into requested program AVM streams to enable efficient distribution of geographically targeted (i.e., local) advertisements. The motivation to combine DAVIC MIB with Aras is equally applicable to claims 12 and 52 as it was to been discussed previously with respect to claim 18 in the '187 patent. For this reason, the motivation to combine presented above with respect to claim 18 of the '187 patent are equally applicable to claims 12 and 52 as it was to claims 8, 28, and 40, such that the limitations of claims 12 and 52 are rendered obvious by the combination of DAVIC MIB and Aras.
at a later time, inserting the first stream of packets into a second stream of packets.		
13. The method of claim 12 wherein the content of the first stream of packets is varied depending on the identity of one or more users.	103	When varying the content with the "identity of the user" varies the content with the characteristics or demographics of the user, the limitations of claims 13 and 53 are rendered obvious by the combination of DAVIC MIB and Aras for the reasons discussed above with respect to claims 12 and 52.

Claim Charts for U.S. Patent Nos. 5,778,187, 5,983,005, and 6,434,622

Claims for U.S. Patent No. 5,983,005 filed July 6, 1998 (claiming priority to U.S. Patent No. 5,778,187 filed May 9, 1996)	A DAVIC MIB for Video System Management	Other References
14. The method of claim 13 wherein the first stream of packets contains advertising information.	103	103 Claims 14, 31, and 54 add the limitation introduced in claim 10 of the '187 patent to the limitations of claims 13, 30, and 53, respectively. Thus, the substantive limitations found in claims 14, 31, and 54 were addressed previously with respect to the earlier-provided discussions of claims 13, 30, and 53 and claim 10 of the '187 patent. Moreover, for the reasons articulated with respect to claims 13, 30, and 53 and claim 10 of the '187 patent, the limitations of claims 14, 31, and 54 are met by the combination of DAVIC MIB and Aras, such that a finding of invalidity is proper.
15. The method of claim 1 wherein at least one stream of packets comprises copyrighted selections and	102 and 103 Claims 15 and 42 add the limitations introduced in claim 17 of the '187 patent to the limitations of claims 1 and 26, respectively. Thus, the substantive limitations found in claims 15 and 42 were addressed previously with respect to the earlier-provided discussions of claim 1 and claim 17 of the '187 patent. Moreover, for the reasons articulated with respect to claims 1 and 26, and claim 17 of the '187 patent, the limitations of claims 15 and 42 are met by DAVIC MIB alone and also rendered obvious by the combination of DAVIC MIB and Real 1.01 and/or Real 2.0, such that a finding of invalidity is proper.	
the records that are accumulated indicate which users received specific copyrighted selections.		
16. The method of claim 1 wherein at least one stream of packets comprises audio and/or visual selections	102 Claims 16 and 43 add to claims 1 and 26, respectively, limitations similar to those limitations introduced in claims 6 and 13 of the '187 patent. Claims 16 and 43 add broader limitations than those introduced by claims 6 and 13 of the '187 patent in that claims 16 and 43 specify "audio and/or visual selections" while claims 6 and 13 of the '187 patent specify "advertising" and "music" selections. Insofar as "audio and/or visual selections" is a broader term that encompasses "advertising" and "music" selections, the limitation is invalid for the reasons previously discussed with respect to claims 6 and 13 of the '187 patent. Accordingly, the substantive limitations found in claims 16 and 43 were addressed previously with respect to the earlier-provided discussions of claims 1 and 26 and claims 6 and 13 of the '187 patent.	103 Moreover, for the reasons articulated with respect to claims 1, 6, and 13 of the '187 patent, the limitations of claim 16 are anticipated by DAVIC MIB alone and rendered obvious by combinations of DAVIC MIB with Real 1.01 and/or Real 2.0, such that a finding of invalidity is proper. Similarly, for the reasons articulated with respect to claim 26 and claims 6 and 13 of the '187 patent, the limitations of claim 43 are anticipated by DAVIC MIB alone and met by the combination of DAVIC MIB with Real 1.01 and/or Real 2.0, such that a finding of invalidity is proper.
and the records that are accumulated indicate which users did or did not listen to and/or view the entire		

Claim Charts for U.S. Patent Nos. 5,778,187, 5,983,005, and 6,434,622

Claims for U.S. Patent No. 5,983,005 filed July 6, 1998 (claiming priority to U.S. Patent No. 5,778,187 filed May 9, 1996)	A DAVIC MIB for Video System Management	Other References
17. The method of claim 1 further comprising the steps of: compressing the stream of packets in their passage from source to user, and decompressing the stream of packets near the user.	102 and 103 Claims 17, 34, and 56 add the limitation introduced in claim 14 of the '187 patent to the limitations of claims 1, 25, and 44, respectively. Thus, the substantive limitations found in claims 17, 34, and 56 were addressed previously with respect to the earlier-provided discussions of claims 1, 25, and 44 and claim 14 of the '187 patent. Moreover, for the reasons articulated with respect to claims 1, 25, and 44 and claim 14 of the '187 patent, the limitations of claims 17, 34, and 56 are met by DAVIC MIB alone, and also rendered obvious by the combination of DAVIC MIB with either or both of Real 1.01 and Real 2.0, such that a finding of invalidity is proper.	
18. The method of claim 17 wherein the compressing step uses a compression algorithm that is selected in accordance with the content of the information being communicated in the stream of packets.	102 and 103 Claims 18, 35, and 58 add the limitation introduced in claim 15 of the '187 patent to the limitations of claims 17, 34, and 56, respectively. Thus, the substantive limitations found in claims 18, 35, and 58 were addressed previously with respect to the earlier-provided discussions of claims 17, 34, and 56 and claim 15 of the '187 patent. Moreover, for the reasons articulated with respect to claims 17, 34, and 56 and claim 15 of the '187 patent, the limitations of claims 18, 35, and 58 are anticipated or at least rendered obvious by DAVIC MIB, such that a finding of invalidity is proper.	
19. The method of claim 18 wherein the compressing step inserts into each packet an identification of the compression algorithm used and		103 Claims 19 and 59 add the limitation introduced in claim 16 of the '187 patent to the limitations of claims 18 and 56, respectively. Thus, the substantive limitations found in claims 19 and 59 were addressed previously with respect to the earlier-provided discussions of claims 18 and 56 and claim 16 of the '187 patent. Furthermore, for the reasons articulated with respect to claims 18 and 56 and claim 16 of the '187 patent, the limitations of claims 19 and 59 are rendered obvious by the combination of DAVIC MIB and Real 1.01, such that a finding of invalidity is proper.
the decompressing step monitors each packet to read such identification and to vary its decompression algorithm in response thereto.		
20. The method of claim 17 wherein the compressing step uses a	102	

Claim Charts for U.S. Patent Nos. 5,778,187, 5,983,005, and 6,434,622

Claims for U.S. Patent No. 5,983,005 filed July 6, 1998 (claiming priority to U.S. Patent No. 5,778,187 filed May 9, 1996)	A DAVIC MIB for Video System Management	Other References
compression algorithm and the decompression step uses a decompression algorithm that varies with the user to whom the stream of packets are delivered.	DAVIC's streams element MIB provides for streams that may be encoded using MPEG compression or H. 261 compression. See p. 113, col. 1. Accordingly, since each stream may be assigned to a user, some users will receive MPEG compressed streams and others will receive H. 261 compressed streams. Thus, the compression step and decompression step varies with the user to whom the stream is delivered. For at least this reason and the reasons discussed previously with respect to claims 17, 34, and 56, each limitation of claims 20, 36, and 60 is anticipated by DAVIC MIB, such that a finding of invalidity is proper.	
21. The method of claim 17 wherein the compressing step uses a compression algorithm that varies with the characteristics of the communications network.	103	Claims 21, 37, and 61 are rendered obvious by the combination of DAVIC MIB and Real 2.0. Real 2.0 states that two different bit rates may be used. In particular, Real 2.0 discloses that 14.4 kbps and 28.8 kbps compression algorithms may be used. Real 2.0 indicates that the 14.4 compression format may be used in circuits likely to experience congestion, such as a 56 kbps circuit with less bandwidth. See p. 8. Real 2.0 states that bandwidth is automatically negotiated so that a client is routed to a compression format optimized for the client's operating environment so that a client may select the 14.4 kbps format when less bandwidth is available and 28.8 kbps when more bandwidth is available. See p. 56. In particular, Real 2.0 indicates that the compression format is selected using information provided by the player. See p. 58. The Player is configured with information about its connection quality and capabilities and this information is passed to the RealAudio Server when a file is requested. The Server uses this information and its knowledge of available file encodings to provide the appropriate one for the Player. If the connecting Player is an old Player that does not supply this information, the RealAudio Server uses its knowledge of the Player version to assign it capabilities. This allows bandwidth negotiation to work with any currently supported RealAudio Player. See p. 58.

Claims for U.S. Patent No. 5,983,005 filed July 6, 1998 (claiming priority to U.S. Patent No. 5,778,187 filed May 9, 1996)	A DAVIC MIB for Video System Management	Other References
		Motivation to combine DAVIC MIB with Real 2.0 was provided earlier with respect to claim 1 of the '187 patent. Additional motivation was acknowledged by the Examiner in the Office Action dated July 18, 1997, by stating it is well known that compression allows for "efficient transmission of data at a faster rate using less memory storage space." See Office Action at 4.
		Accordingly, each and every element in claims 21, 22, 37, 38, 61, and 62 is found in either DAVIC MIB or Real 2.0, rendering claims 21, 22, 37, 38, 61, and 62 obvious by the combination of DAVIC MIB and Real 2.0.
22. The method of claim 17 wherein the decompressing step uses a decompression algorithm that varies with the characteristics of the communications network.		103 See claim 21 of the '005 patent.
23. The method of claim 1, further comprising the step of varying the information content of at least one stream of packets with the identity of the users to whom the at least one stream of packets are delivered.	103	103 See claim 2 of the '005 patent.
24. The records that are accumulated include user information and system-related information	102 DAVIC MIB provides user information in the table of clients and system information (e.g., stream state) that indicates how a user's set top box is receiving the stream (e.g., fast-forward, pause, rewind), thus providing user and system-related information. See, e.g., p. 113, right col. ("Note: the identity of this session is not included in the *session Table*. Rather, there is another table of clients to the video server. Each entry contains a field *session/index*. Using this field, it is possible to relate users with their sessions.") and p. 113, left col. ("*streamState* – state of the stream, Play Ffwd, Rwd, Pause").	102
25. A method for transmitting at least one stream of audio and/or visual information over a communications network to one or more users comprising the steps of:	For at least this reason and the reasons discussed previously with respect to claims 1, 25, and 44, each limitation of claims 24, 40, and 64 is anticipated by DAVIC MIB, such that a finding of invalidity is proper. 102 See claim 1 of the '005 patent. Note that claim 25 only includes start time.	

Claims for U.S. Patent No. 5,983,005 filed July 6, 1998 (claiming priority to U.S. Patent No. 5,778,187 filed May 9, 1996)	A DAVIC MIB for Video System Management	Other References
controlling the routing of the stream of information through the network in response to selection signals received from the users, and		
monitoring the reception of the stream of information by the users and		
accumulating records relating to the reception of the stream of information by the users,		
wherein at least one stream of information comprises an audio and/or visual selection and		
the records that are accumulated indicate the time that a user starts receiving the audio and/or visual selection.		
26. The method of claim 25 further comprising the step of varying the information content of at least one stream of information with the identity of the user to whom the at least one stream of information is delivered.		103 See claim 2 of the '005 patent.
27. The method of claim 26 wherein the varied information content is inserted into the stream of audio and/or visual information.		103 See claim 3 of the '005 patent.
28. The method of claim 25 further comprising the steps of:		103 See claim 8 of the '005 patent.
storing a first stream of information received by the user at a first time and		
at a later time, inserting the first stream of information into a second stream of information received by the user, wherein the content of the first stream of information is varied depending on the identity of the user.		
29. The method of claim 28 wherein the first stream of information contains advertising information.		103 See claim 11 of the '005 patent.

Claim Charts for U.S. Patent Nos. 5,778,187, 5,983,005, and 6,434,622

Claims for U.S. Patent No. 5,983,005 filed July 6, 1998 (claiming priority to U.S. Patent No. 5,778,187 filed May 9, 1996)	A DAVIC MIB for Video System Management	Other References
30. The method of claim 25 further comprising the steps of:		103
storing a first stream of information at an intermediate point in the distribution architecture at a first time and		See claim 13 of the '005 patent.
at a later time, inserting the first stream of information into a second stream of information, wherein the content of the first stream of information is varied depending on the identity of one or more users.		Claims 30 adds to claim 25 the limitations introduced in claims 12 and 13. Thus, the substantive limitations found in claim 30 were addressed previously with respect to the earlier-provided discussions of claims 12, 13, and 25. Moreover, for the reasons articulated with respect to claims 12, 13, and 25, the limitations of claim 30 are met by the combination of DAVIC MIB and Aras, such that a finding of invalidity is proper.
31. The method of claim 30 wherein the first stream of information contains advertising information.		103 See claim 14 of the '005 patent.
32. The method of claim 25 further comprising the steps of:		103
storing a first stream of information received by the user at a first time and at a later time, inserting the first stream of information into a second stream of information received by the user, wherein the content of the first stream of information is varied depending on the identity of the users to whom the first stream of information is delivered.		See claim 8 of the '005 patent.

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Claim Charts for U.S. Patent Nos. 5,778,187, 5,983,005, and 6,434,622

Claims for U.S. Patent No. 5,983,005 filed July 6, 1998 (claiming priority to U.S. Patent No. 5,778,187 filed May 9, 1996)	A DAVIC MIB for Video System Management	Other References
33. The method of claim 25, further comprising the step of varying the information content of at least one stream of information with the identity of the users to whom the at least one stream of information is delivered.	103	103 See claim 2 of the '005 patent.
34. The method of claim 25 further comprising the steps of:	102 and 103	
compressing the stream of information in its passage from source to user, and	See claim 17 of the '005 patent.	
decompressing the stream of information near the user.		
35. The method of claim 34 wherein the compressing step uses a compression algorithm that is selected in accordance with the content of the information being communicated in the stream of information.	102 and 103 See claim 18 of the '005 patent.	
36. The method of claim 34 wherein the compressing step uses a compression algorithm and the decompression step uses a decompression algorithm that varies with the user to whom the stream of packets are delivered.	102 See claim 20 of the '005 patent.	
37. The method of claim 34 wherein the compressing step uses a compression algorithm that varies with the characteristics of the communications network.	102	103 See claim 21 of the '005 patent.
38. The method of claim 34 wherein the decompressing step uses a decompression algorithm that varies with the characteristics of the communications network.	103 See claim 21 of the '005 patent.	

Claim Charts for U.S. Patent Nos. 5,778,187, 5,983,005, and 6,434,622

Claims for U.S. Patent No. 5,983,005 filed July 6, 1998 (claiming priority to U.S. Patent No. 5,778,187 filed May 9, 1996)	A DAVIC MIB for Video System Management	Other References
39. The method of claim 25 wherein multiple streams of audio and/or visual information are transmitted over the communications network and the user can select which stream to receive.	102 and 103	
	Dependent claim 39 further limits independent claim 25 by adding the limitation that the user may select from among multiple streams of audio and/or visual information transmitted over the communications network. Claim 39 includes the limitation introduced in claim 30 of the '187 patent. Thus, the substantive limitations found in claim 39 were addressed previously with respect to the earlier-provided discussions of claim 25 and claim 30 of the '187 patent. Furthermore, for the reasons articulated with respect to claim 25 and claim 30 of the '187 patent, the limitations of claim 39 are anticipated by DAVIC MIB, such that a finding of invalidity is proper.	
40. The method of claim 25, wherein the records that are accumulated include user information and system-related information.	102	See claim 24 of the '005 patent.
41. The method of claim 26 wherein the records that are accumulated indicate how many users received specific advertising information.	102	See claim 5 of the '005 patent.
42. The method of claim 26 wherein at least one stream of information comprises copyrighted selections and indicate which users received specific selections.	102 and 103	See claim 15 of the '005 patent.
43. The method or claim 26 wherein at least one stream of information comprises audio and/or visual selections and the records that are accumulated indicate which users did or did not listen to and/or view the entire selection.	102 and 103	See claim 16 of the '005 patent.

Claim Charts for U.S. Patent Nos. 5,778,187, 5,983,005, and 6,434,622

Claims for U.S. Patent No. 5,983,005 filed July 6, 1998 (claiming priority to U.S. Patent No. 5,778,187 filed May 9, 1996)	A DAVIC MIB for Video System Management	Other References
44. A communication system comprising:	102 and 103	
means for converting at least one stream of audio and/or visual information into a stream of addressed digital packets complying with the specifications of a network communication protocol,	See claim 1 of the '187 patent. Only start time claimed.	
means for routing such stream via a communication network to selected users,		
means for controlling the routing of the stream of packets in response to selection signals received from the users, and		
means for monitoring the reception of packets by the user and for accumulating records that indicate which streams of packets were received by which users,		
wherein at least one stream of packets comprises an audio and/or visual selection, and		
the means for monitoring further includes means for accumulating records that indicate the time that a user starts receiving the audio and/or visual selection.		
45. The method of claim 44 further comprising means for varying the information content of at least one stream of packets with the identity of the user to whom the at least one stream of packets are delivered.	103	See claim 2 of the '005 patent.
46. The method of claim 45 wherein the varied information content is inserted into the stream of audio and/or visual information before such stream is converted into a stream of packets.	103	See claim 3 of the '005 patent.

Claim Charts for U.S. Patent Nos. 5,778,187, 5,983,005, and 6,434,622

Claims for U.S. Patent No. 5,983,005 filed July 6, 1998 (claiming priority to U.S. Patent No. 5,778,187 filed May 9, 1996)	A DAVIC MIB for Video System Management	Other References
47. The method of claim 45, wherein the varied information contains advertising information.		103
48. The communication system of claim 44 further comprising means for generating from the stream of packets received at the user an audio output and/or a visual display.	102 and 103	See claim 4 of the '005 patent.
49. The communication system of claim 44 further comprising means for storing packets received at the user during a first time period and	See claim 6 of the '005 patent.	103
means for inserting such packets into other packets received at the user at a later time period.		See claim 7 of the '005 patent.
50. The communication system of claim 49 wherein the content of the stream of packets received during the first time period is varied depending on the identity of the user.	103	103
51. The communication system of claim 50 wherein the stream of packets received during the first time period contains advertising information.	See claim 11 of the '005 patent	See claim 8 of the '005 patent.
52. The communication system of claim 44 further comprising means for storing packets at an intermediate point in the distribution architecture at a first time and	103	103
52. The communication system of	Dependent claim 52 further limits independent claim 44 in the same manner that claim 12 further limits independent claim 1, with the exception that claim 52 recites inserting packets into other packets while claim 12 recites inserting a stream of packets into another stream of packets. The analysis discussed above with respect to claim 12 applies to invalidate claim 52 because inasmuch as a stream of packets represents a group of packets, insertion of a stream of packets into another stream of packets is equivalent to insertion of a group of packets into another group of packets.	See claim 12 of the '005 patent.
means for inserting such packets into other packets to be received by one or more users at a later time period.		

Claim Charts for U.S. Patent Nos. 5,778,187, 5,983,005, and 6,434,622

Claims for U.S. Patent No. 5,983,005 filed July 6, 1998 (claiming priority to U.S. Patent No. 5,778,187 filed May 9, 1996)	A DAVIC MIB for Video System Management	Other References
53. The communication system of claim 52 wherein the content of the stream of packets received during the first time period is varied depending on the identity of the one or more users.	103	
54. The communication system of claim 53 wherein the stream of packets received during the first time period contains advertising information.	103	
55. The communication system of claim 52 wherein the content of the stream of packets received during the first time period is varied depending on the identity of the users to whom the stream of packets are delivered.	See claim 14 of the '005 patent.	
		103
		See claim 13 of the '005 patent.
		Claim 55 includes all of the limitations of claim 53 with the exception that claim 55 requires variation of the content of the first stream based on the identity of multiple recipients rather than based on the identity of a single recipient. Nevertheless, the earlier-provided discussion of claim 53 is applicable to claim 55 since Aras describes customizing per demographic (i.e., collection of multiple users). See e.g., column 26, lines 44-61. Moreover, for the reasons articulated with respect to claim 53, the limitations of claim 55 are either not enabled or are met by the combination of DAVIC MIB and Aras, such that a finding of invalidity is proper.
56. The communication system of claim 44 further comprising: means for compressing the stream of packets in their passage from source to user, and downstream of the compressing means, means for decompressing the stream of packets.	102 and 103 See claim 17 of the '005 patent.	
57. The communication system of claim 56 wherein the compressing means is located near the converting means and the decompressing means is located at the user.	102 and 103 See claim 44 of the '187 patent.	

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Claim Charts for U.S. Patent Nos. 5,778,187, 5,983,005, and 6,434,622

Claims for U.S. Patent No. 5,983,005 filed July 6, 1998 (claiming priority to U.S. Patent No. 5,778,187 filed May 9, 1996)	A DAVIC MIB for Video System Management	Other References
58. The communication system of claim 56 wherein the compressing means uses a compression algorithm that is selected in accordance with the content of the information being communicated in the stream of packets.	102 and 103 See claim 18 of the '005 patent.	
59. The communication system of claim 56 wherein the compressing means inserts into each packet an identification of the compression algorithm used and	103 See claim 19 of the '005 patent.	
the decompressing means monitors each packet to read such identification and to vary its decompression algorithm in response thereto.		
60. The method of claim 56 wherein the compressing means uses a compression algorithm and the	102 See claim 20 of the '005 patent.	
decompression means uses a decompression algorithm that varies with the user to whom the stream of packets are delivered.		
61. The method of claim 56 wherein the compressing means uses a compression algorithm that varies with the characteristics of the communications network.		103 See claim 21 of the '005 patent.
62. The method of claim 56 wherein the decompressing means uses a decompression algorithm that varies with the characteristics of the communications network.		103 See claim 2 of the '005 patent.

Claims for U.S. Patent No. 5,983,005 filed July 6, 1998 (claiming priority to U.S. Patent No. 5,778,187 filed May 9, 1996)	A DAVIC MIB for Video System Management	Other References
63. The method of claim 44 further comprising means for varying the information content of at least one stream of packets with the identity of the users to whom the at least one stream of packets are delivered.	103	See claim 21 of the '005 patent.
64. The method of claim 44, wherein the records that are accumulated include user information and system-related information.	102	
65. A method for transmitting message packets over a communications network comprising the steps of:	102 and 103	
converting at least one stream of audio and/or visual information into at least stream of addressed digital packets complying with the specifications of a network communication protocol,	Independent claim 65 corresponds to independent claim 47 of the '187 patent, but is broader than claim 47 of the '187 because claim 65 only requires packet streams that include audio and/or visual selections while claim 47 requires packet streams that include music selections. Since the "audio and/or visual selections" recited by claim 65 are broader than and inclusive of the "music selections" recited by claim 47 of the '187 patent, claim 65 is invalid for the same reasons discussed previously with respect to claim 47 of the '187 patent.	
for each stream, routing such stream to one or more users,		
controlling the routing of the stream of packets in response to selection signals received from the users, and		
monitoring the reception of packets by the users and accumulating records that indicate which streams of packets were received by which users,		
wherein at least one stream of packets comprises audio and/or visual selections and		
the records that are accumulated indicate how many users did or did not listen to and/or view the entire selection.		

Claim Charts for U.S. Patent Nos. 5,778,187, 5,983,005, and 6,434,622

Claims for U.S. Patent No. 5,983,005 filed July 6, 1998 (claiming priority to U.S. Patent No. 5,778,187 filed May 9, 1996)	A DAVIC MIB for Video System Management	Other References
66. A method for transmitting at least one stream of audio and/or visual information over a communications network to a plurality of users comprising the steps of:	102 and 103	
	Independent claim 66 corresponds to independent claim 48 of the '187 patent, but is broader than claim 48 of the '187 patent because claim 66 only requires packet streams that include audio and/or visual selections while claim 48 requires packet streams that include music selections.	
	Since the "audio and/or visual selections" recited by claim 66 are broader than and inclusive of the "music selections" recited by claim 48 of the '187 patent, claim 66 is invalid for the same reasons discussed previously with respect to claim 48 of the '187 patent.	
controlling the routing of the stream of information through the network in response to selection signals received from the users, and		
monitoring the reception of the stream of information by the users and accumulating records relating to the reception of the stream of information by the users, wherein at least one stream of information comprises audio and/or visual selections and the records that are accumulated indicate how many users did or did not listen to and/or view the entire selection.		
67. A method for transmitting message packets over a communications network comprising the steps of:	102 and 103	
converting at least one stream of audio and/or visual information into at least stream of addressed digital packets complying with the specifications of a network communication protocol,	DAVIC MIB, which meets the limitations of claim 65 for the reasons provided earlier, therefore also meets the limitations of claim 67.	
for each stream, routing such stream to one or more users,		
controlling the routing of the stream of packets in response to selection signals received from the users, and		

Claims for U.S. Patent No. 5,983,005 filed July 6, 1998 (claiming priority to U.S. Patent No. 5,778,187 filed May 9, 1996)	A DAVIC MIB for Video System Management	Other References
monitoring the reception of packets by the users and accumulating records that indicate which streams of packets were received by which users, wherein at least one stream of packets comprises audio and/or visual selections and the records that are accumulated indicate which users did or did not listen to and/or view the entire selection.		
68. A method for transmitting at least one stream of audio and/or visual information over a communications network to a plurality of users comprising the steps of:	102 and 103	
	As discussed previously with respect to claim 67, DAVIC MIB contemplates the notion of accumulating records that indicate which users did or did not listen to and/or view an entire selection. Accordingly, DAVIC MIB, which meets the limitations of claim 66 for the reasons provided earlier, therefore also meets the limitations of claim 68. Thus, claims 66 and 68 are anticipated by DAVIC MIB alone and rendered obvious by the combination of DAVIC MIB and either or both of Real 1.01 and Real 2.0, rendering claim 68 invalid.	
controlling the routing of the stream of information through the network in response to selection signals received from the users, and		
monitoring the reception of the stream of information by the users and accumulating records relating to the reception of the stream of information by the users, wherein at least one stream of information comprises audio and/or visual selections and the records that are accumulated indicate which users did or did not listen to and/or view the entire selection.	The DAVIC MIB reference describes TRAPs and streaming session records that together indicate which users did and did not listen to the entire selection. In particular, TRAPs report streams not fully received by an end-user and thus indicate users that did not receive or "listen" to the entire selection. To the extent that a TRAP does not exist, reception of a stream may be inferred, and the sessionTable of the DAVIC server is a record of users that did receive and thus, did "listen" to the entire selection. See, e.g., p. 113, left column ("There is also a sessionTable which records the currently active sessions ... sessionStreams – identifier of the stream supporting this session") and see, e.g., p. 113, right column ("Note: the identity of the user of this session is not included in the sessionTable. Rather, there is another table of clients to the video server. Each entry contains a field sessionIndex. Using this field, it is possible to relate users with their sessions.")	

Claim Charts for U.S. Patent Nos. 5,778,187, 5,983,005, and 6,434,622

Claims for U.S. Patent No. 6,434,622 filed July, 17, 2000 (claiming priority to U.S. Patent No. 5,778,187 filed May 9, 1996)	DAVIC MIB for Video Server System Management	Other References
1. A method for monitoring the forwarding of real-time information to at least one user having access to a communications network comprising:	102	
	DAVIC MIB's interactive video services system includes video servers that forward real-time information to end-user set top boxes having access to a delivery network. As discussed in more detail below, the real-time information is forwarded as a stream of packets, the transmission of which is monitored by the streams element MIB of the DAVIC video server. Accordingly, the preamble limitation of "monitoring the forwarding of real-time information to at least one user" is disclosed.	
(a) generating delivery-commencement indications of real-time information forwarded to the user by means of the communications network, wherein the real-time information comprises a plurality of packets forwarded over the communications network to the user,	DAVIC MIB describes generating commencement indications (i.e., start time record entries) for real-time information delivery to the end-user. In particular, streaming session records are generated to indicate the start time for packet stream delivery over the delivery network to the end-user set top box. See, e.g., p. 113, left column, (In the *StreamEntry* record is a *sessionStartTime* record defined as the "time this session started or is scheduled to start"). Also see, e.g., p. 112, ("It should be possible to relate a stream with the end user …"; "[the Stream Element MIB] also identifies the end user and the local interface through which the stream is being played out.").	
(b) verifying the operational status of the user's access to the communications network during delivery of the real-time information, and	"Verifying the operational status of the user's access" includes three subcomponents that each are met by DAVIC MIB, namely (1) verifying that the user has access (2) to the delivery network (3) while a stream is being transmitted. In particular, DAVIC MIB contemplates using the Simple Network Management Protocol (SNMP) as a video server management tool. See, e.g., p. 110, left column. SNMP includes a protocol procedure known as the SNMP polling operation, which involves generation and delivery of periodic polling requests generated by a network management system to various networked devices, including end-user devices (such as the set top boxes in DAVIC MIB). See TCP/IP p. 360-361 (showing an SNMP Manager polling an SNMP agent (e.g., a user device). A networked device generates an SNMP response to a received polling request to indicate its connectedness. Id. at Fig. 25.1 (showing the SNMP agent responding to the polling request). This procedure is akin to a periodic PING, the only mechanism described by the '622 patent specification for verifying network access by users. Moreover, this process clearly involves verifying that a user has access to the delivery network, and the periodic nature of this polling operation indicates that it is performed during the streaming operation and that anticipates the claimed process of "verifying the operational status of the user's access."	
	Additionally, DAVIC MIB indicates another mechanism for verifying both the operational status of a user's network access (as claimed) and that of user's stream access (not claimed). In particular, DAVIC MIB describes employing a TRAP utility to report changes in user status such as "rejections, aborted streams, and communications problems." See p. 112, right column. The TRAP utility monitors communications involving the set top box during delivery of a stream to the end-user in order to detect, record and report such status changes. A skilled artisan reviewing DAVIC MIB would be led by the term "communication problems" to	

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	understand that the TRAP is useful in monitoring network access problems and stream reception problems, and that DAVIC MIB discloses verification of each through the use of the term "communication problems."	
	Furthermore, it is clear that DAVIC MIB uses the term "communication problems" to include at least network access problems. Specifically, DAVIC MIB distinguishes "communications problems" from stream-related problems by identifying three distinct problem types, namely: "rejections, aborted streams, and communications problems." In this context, the communications problems contemplated by DAVIC MIB are related to conditions other than aborted or rejected streams; otherwise, it would not be listed as an alternative to rejections and aborted streams. With this guidance and cursory network knowledge, the skilled artisan would appreciate that DAVIC MIB references communication problems as an identifier for problems, such as network access problems, that may be distinguished from stream abortions that may occur, e.g., in response to a user request, or stream rejections that may occur, e.g., in response to streaming software problems. Accordingly, by using TRAPS as a mechanism for monitoring and reporting on "communication problems," the DAVIC server monitors and thereby verifies the operational status of the user's access to the communications network during delivery of the real-time information.	
	Still further, the use by DAVIC MIB of a TRAP to record "aborted streams," among other things, clearly constitutes disclosure of verifying stream reception by the user. In particular, DAVIC MIB configures the streams element to monitor the streaming session for changes in stream state related to stream transmission, such as rejections or abortions, as evidenced by its generation of TRAPs in response to these changes. And, to the extent that the terms "communications problems" are construed more broadly to include both network access problems and other problems that directly or indirectly impact successful stream transmission, the streams element also monitors and generates TRAPs in response to these changes. Accordingly, the DAVIC server monitors, and thereby verifies, the operational status of the user's access to each stream of real-time information during delivery of such streams, as evidenced by the server generating TRAPs based on "aborted streams," as well as rejections and communications problems that impact stream transmission.	
(c) generating delivery-termination indications of the real-time information forwarded to the user.	The generation of termination indications for requested real-time streams that are presently being routed also are described in DAVIC MIB. In particular, the DAVIC MIB stream element MIB provides for a TRAP that is generated for streams that are terminated prior to their natural completion. See e.g., p. 112, right column ("TRAPS are used to report…changes in state of a stream such as rejections, aborted streams, and communications problems"). This alone satisfies claim 1, as the TRAP is a generated indication of the termination of the delivery of a stream to the end user.	
	Furthermore, streaming session records include *sessionEndTime* entries that are generated to indicate delivery termination for streams that were not prematurely terminated. See, e.g., p. 113, left column. ("*sessionEndTime* – time this session is due to end"). Thus, for streams not having a TRAP entry, the *sessionEndTime*	

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	entries reflect "delivery-termination indications of the real-time information forwarded to the user" in that they indicate termination of the stream, consistent with the claim. And, while not required by the claim presently recited, the generation of delivery-termination indications is provided for all streams through aggregation of the aforementioned records. Specifically, TRAPs are generated as delivery-termination indications for streams prematurely terminated, while the *sessionEndTime* entries are generated to indicate the termination of delivery for all other streams.	
2. The method of claim 1 wherein the verifying step indicates abnormal termination of the user's access to the communications network, and	102 This limitation is met by DAVIC MIB for the reasons discussed with respect to independent claim 24, particularly with respect to the second noted feature of claim 24. Accordingly, each and every element of claims 2 and 30 are anticipated by DAVIC MIB, rendering claims 2 and 30 invalid.	
wherein the generated delivery-termination indications then also comprises indications of the abnormal termination.		
3. The method of claim 1 further comprising updating a database with information provided by the delivery-commencement and the delivery-termination indications.	102 This limitation is met by DAVIC MIB for the reasons discussed with respect to independent claim 24, particularly with respect to the third noted feature of claim 24. Accordingly, each and every element of claim 3 is anticipated by DAVIC MIB, rendering claim 3 invalid.	
4. The method of claim 1 wherein the commencement and termination indications further comprise time information.	102 This limitation is met by DAVIC MIB for the reasons discussed with respect to independent claim 24, particularly with respect to the first noted feature of claim 24. Accordingly, claim 4 is anticipated by DAVIC MIB, and thus invalid.	
5. The method of claim 1 wherein the operational status comprises an active/working status.	102 The DAVIC server meets this limitation. In particular, the lack of a TRAP record indicates the lack of stream abortion/rejection or communications problems and thus indicates "active/working status" of the user's access to the communications network. See discussion above with respect to claim 1. Moreover, the lack of the generation of a TRAP in response to stream rejections or abortions indicates "active/working status" of the user's access to the communications network. And, to the extent that the terms "communications problems" are construed more broadly to include both network access problems and other problems that directly or indirectly impact successful stream transmission, the lack of generation of a trap in response to communications problems indicates "active/working status" of the user's access to the communications network. See discussion above with respect to claim 1. Accordingly, the limitations of claims 5 are anticipated by DAVIC MIB, rendering claim 5 invalid.	

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6. The method of claim 1 wherein the step of verifying further comprises forwarding over the communications network messages concerning the operational status of the user's access to the communications network.	102 DAVIC MIB contemplates using the Simple Network Management Protocol (SNMP). See, e.g., p. 110, left column. SNMP includes a protocol procedure known as the SNMP polling system, which involves periodic polling requests generated by a network management system and delivered to various networked devices, including end-user devices (such as the set top boxes in DAVIC MIB). See TCP/IP p. 360-361 (showing an SNMP Manager polling an SNMP agent (e.g., a user device). A networked device generates an SNMP response to a received polling request to indicate its connectedness. See Id. at Fig. 25.1 (showing the SNMP agent responding to the polling request). This procedure is akin to a periodic PING, and it is the only mechanism described by the '622 patent specification for verifying network access by users anticipating of the claimed process of "forwarding over the communications network messages concerning the operational status of the user's access to the communications network." Moreover, this process involves communication of network messages (polling requests and responses) concerning the operational status of a user's access to the communication network, as claimed. Furthermore, by employing TRAPs to capture status change information at the set top box for later transmission to the video server, per SNMP general procedures, DAVIC MIB also discloses user-initiated forwarding of communications network messages concerning the operational status of the user's access. In particular, DAVIC MIB discloses the use of a TRAP record to reflect information related to stream terminations, such as "rejections" and "aborted streams," and other "communication problems." Accordingly, the limitations of claims 6 and 25 are anticipated by DAVIC MIB, rendering claims 6 and 25 invalid.	
7. The method of claim 6 wherein the messages concerning the operational status of the user's access to the communications network are initiated by the user.	102 Claims 7, 32, 42, and 52 are anticipated by DAVIC MIB for the reasons discussed above in reference to claims 6 and 25. Note that also inherent to SNMP TRAPs is a user-initiated protocol procedure.[3] SNMP TRAPs detect an event passively, as described by DAVIC MIB, and thereafter generate a report that is sent from the user device to a network managed system to inform of the detected event.[4] This process of using SNMP TRAPPING, which is clearly employed by DAVIC MIB, is anticipatory of claims 7, 32, 42, and 52, rendering those claims invalid.	

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[3] See Id. at 360 (See 25.2.5 "Notify manager when something happens on the agent"); See also Fig. 25.1 (illustrating a TRAP being generated); See also p. 385, Section 25.10 "TRAP" to indicate that something has happened on the agent that the manager might want to know about." This may include a *"coldStart"*, a *"warmStart,"* a *"linkDown,"* a *"linkUp,"* or other event. [Id at 385].

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8. The method of claim 6 wherein the messages concerning the operational status of the user's access to the communications network are received by the user and responded to by the user.	102 Claims 8, 31, 36, 43, and 51 are anticipated by DAVIC MIB for the reasons discussed above in reference to claims 6 and 25, with particular reference to the SNMP polling procedure. Thus, claims 8, 31, 36, 43, and 51 are invalid.	
9. The method of claim 6 wherein the communications network further comprises at least one server computer, and	102 DAVIC MIB contemplates using the Simple Network Management Protocol (SNMP) as a video server management tool. See, e.g., p. 110, left column. As described with reference to claims 1 and 6, SNMP includes a protocol procedure known as the SNMP polling system, which involves periodic polling requests generated by a network management system (or a network management server) and delivered to various networked devices, including end-user devices (such as the set top boxes in DAVIC MIB). See TCP/IP p. 360-361. The networked devices generate SNMP responses to indicate their connectedness. See Id. at Fig. 25.1 (showing the SNMP agent responding to the polling request). This procedure is akin to a periodic PING, the only mechanism described by the '622 patent specification for verifying network access or operational status by users, and it therefore is anticipating of the claimed process of initiating "messages concerning the operational status of the user access ... by the server computer."	
wherein the messages concerning the operational status of the user access to the communications network are initiated by the server computer.	Accordingly, each and every element of claims 9 and 33 is anticipated by DAVIC MIB rendering claims 9 and 33 invalid.	
10. The method of claim 6 wherein the indications of delivery-commencement and of delivery-termination are stored on the server computer.	102 Information is captured by TRAP entries and stream session entries indicating stream commencement and stream termination, as established with respect to claim 1. To the extent necessary, such information (i.e., TRAP information) is communicated to and stored in the DAVIC video server. That is, both the streams element MIB that contains the TRAP entries and the server gateway element MIB that contains the streaming session records are ultimately included in the DAVIC video server. See the DAVIC server architecture figure on p. 111. See p. 112, right column and p. 113, left column. For at least these reasons, the limitations of claim 10 are anticipated by DAVIC MIB, rendering claim 10 invalid.	

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11. The method of claim 1 wherein the indications of delivery-commencement and of delivery-termination are stored at the user.		
12. The method of claim 11 wherein the indications that are stored at the user are later forwarded over the communications network to the server computer.		
13. The method of claim 1 further comprising a step of determining the total delivery time of the real-time information to the user from the delivery-commencement and the delivery-termination indications.	102

The claim is invalid over DAVIC MIB. As discussed above in reference to claim 1 of the '622 patent, DAVIC MIB discloses a system that generates streaming session records that explicitly indicate stream delivery start and stop times (i.e., the *sessionStartTime* and *sessionEndTime* entries of the *StreamEntry* record in the *sessionTable*). Moreover, DAVIC MIB discloses the generation of TRAP entries that indicate premature termination of streams in the same manner as the log entries generated by the Media Servers indicate termination of streams. See p. 112, right column and p. 113, left column. Accordingly, to the extent that calculations of total delivery time are deemed to be made known through the sparse disclosure provided in the '622 patent specification, a skilled artisan would similarly find that calculation of the total delivery time is made known and thus anticipated by the DAVIC video system based on the streaming session records and the TRAP entries.

Still further, DAVIC MIB specifically describes a Business Management Section that receives "actual usage data" for capacity planning and billing purposes. See, e.g., p. 110, right column ("Business Management is interested in usage trends for capacity planning and tuning of business policy. Also need actual usage data for billing purposes."). A calculation of total delivery time would appear to be necessary to generate actual usage data for resource planning (e.g., how long is a server port occupied by a customer during a streaming operation) and for billing purposes (e.g., how much should the customer be charged for selections that have long connect times). | |

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14. The method of claim 13 further comprising a step of determining the content of the real-time information delivered during the total delivery time.	102 DAVIC MIB anticipates each feature. As discussed above in reference to claim 13 of the '622 patent, to the extent that a skilled artisan would be led to these claimed features by the sparse teachings of the '622 patent specification of stream initiation and termination log entries, he or she would similarly have found these features to have been taught by DAVIC MIB to use streaming session records, TRAP records, and a *streamIndex* identifier to determine the total delivery time. Similarly, to the extent that the '622 patent specification teaches the process of determining the content delivered during that total delivery time through the mere use of stream identifiers and indexes, so too does DAVIC MIB through disclosure of a *streamIndex* identifier stored in the streams element MIB, which uniquely identifies the stream and, accordingly, may be used to uniquely identify the content of the stream. See p. 113, left col. If a stream terminates naturally, the content of the stream delivered would be known based on the *streamIndex* alone. If the stream terminates prematurely, the content of the stream delivered may be determined based on the timing of the TRAP entry as related to the stream position, at least to the extent that this '622 patent specification disclosed this feature through the use of log entries. Notably, the streams element MIB also supports the tracking of stream position during the streaming operation. See, e.g., p. 113, left column (*streamPosition* – measured in seconds from the start). Further evidencing a determination of content delivered during total delivery time, the DAVIC video system supports video on demand services, which require tracking of actual usage data for billing purposes. See "Business Management" on p. 110, col. 2. It is well established that video on demand bills include an indication of the demanded content. A skilled artisan would recognize that actual usage data for video on demand services would therefore necessarily include an indication of the content.	
15. The method of claim 13 wherein the total delivery time is determined as the total elapsed time between delivery-commencement and delivery-termination indications during which the user's access to the communications network was also verified to be in an active/working operational status.	102 Claims 15 and 27 are anticipated by DAVIC MIB, which discloses both limitations introduced by these claims, for the same reasons discussed above in reference to claims 5 and 13. Thus, claims 15 and 27 are invalid.	

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16. The method of claim 1 wherein the real-time information comprises audio information, or video information, or advertising information.	102 DAVIC MIB is directed to a management tool that requires and presupposes an interactive video services system which is capable of providing audio and visual information, and which may be used for applications such as the home shopping network that necessarily involve delivery of audio, video, and advertising content. See Abstract, left column. Accordingly, DAVIC MIB discloses each and every element of claim 16, rendering claim 16 invalid.	
17. The method of claim 1 further comprising generating indications of the content of the real-time information.	102 As indicated previously, the DAVIC video system may be used in support of video on demand services. See Abstract. The DAVIC video system tracks actual usage data for billing purposes. See "Business Management" on p. 110, col. 2. It is well established that video on demand bills include an indication of the demanded content. A skilled artisan would recognize that actual usage data for video on demand services would therefore necessarily include an indication of the content. Accordingly, since each and every element in claims 17 and 28 are disclosed by DAVIC MIB, claims 17 and 28 are invalid.	
18. The method of claim 1 wherein an identifier is provided for the user.	102 DAVIC MIB describes an Application MIB that "identifies the end user of the application and the local interface being used by the stream." See p. 112, left column. Furthermore, the stream element MIB also "identifies the end user and the local interface through which the stream is being played out." See p. 112, left column. Accordingly, an identifier for the user is necessarily contemplated by DAVIC MIB. Claim 35 differs slightly from claim 18 in that claim 18 includes (1) the limitations of independent claim 34 (previously shown to be anticipated by DAVIC MIB), and (2) recites that the identifier is provided by the user rather than for the user. DAVIC MIB describes a management tool for an interactive video services system. See, e.g., p. 111 (abstract). A component of the management tool is related to business management with respect to billing. See e.g., p. 110, right column. Since a user directly or indirectly must provide identification to be billed for services, DAVIC MIB contemplates the notion of an identifier being provided by a user.	

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19. The method of claim 18 wherein commencement and termination indications are associated with the identifier.	102 In DAVIC MIB, the TRAP entries and the streaming session record entries which provide stream commencement and termination indications may be associated with a *sessionIndex* in a *sessionTable* that, in turn, may be related to an end user identifier through use of a table of clients. See p. 113, right column, ("Note: the identity of the user of this session is not included in the sessionTable. Rather, there is another table of clients to the video server. Each entry contains a field sessionIndex. Using this field, it is possible to relate users with their sessions."). Accordingly, each and every limitation of claim 19 is disclosed in DAVIC MIB, rendering claim 19 invalid.	
20. The method of claim 1 wherein the communications network includes the Internet.	102 As for the first limitation (claim 20), DAVIC MIB contemplates use of the Internet as the delivery network. See DAVIC MIB (referring to the Simple Network Management Protocol, which is typically associated with the Internet); see also the DAVIC MIB references to *Internet* Protocol addresses used to identify streams and applications. See, e.g., p. 109, left column and p. 113, left column ("*sessionStreams IpAddress*" and "*sessionApplications IpAddress*").	
21. The method of claim 1 wherein the communications network includes a satellite network.	103 Claims 21 and 22 are directed to the last-mile connection to the end-user. The type of last-mile connection used to reach a user is an implementation detail or design choice obvious to a skilled artisan and therefore not sufficient to support novelty as a stand-alone feature. Moreover, DAVIC MIB describes a management tool for a system that may provide VOD services. It is well-known in the art that VOD may be provided over cable TV network or over a satellite network.	
22. The method of claim 1 wherein the communications network includes a cable TV network.	103 See claim 21 of the '622 patent.	
23. The method of claim 1 wherein the communications network includes a private data network.	102 As for claim 23, DAVIC MIB contemplates the use of the Internet as the delivery network. See claim 20 analysis. The Internet is known to interface with data networks that are private in that outside users are not allowed to access data stored within the computers on the private data network (e.g., the private data network is an intranet) but are part of the Internet in that the computers on the private data network are able to access information on computers on other networks via a gateway. Accordingly, DAVIC MIB contemplates the use of a delivery network that includes a private data network.	

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24. A method for monitoring the forwarding of real-time information to at least one user having access to a communications network comprising:	102	
	As illustrated by the underlining shown above, many of the claim 24 limitations are identical to those of claim 1, and hence, those limitations are addressed with respect to the earlier discussion of claim 1. However, claim 24 distinguishes claim 1 by the following claim 24 concepts: (1) the delivery commencement and termination indications include time information; (2) the operational status includes indications of abnormal termination and the delivery termination indications include indications of any abnormal termination; and (3) a database be updated with information provided by the commencement and termination indications.	
	The first feature is disclosed by DAVIC MIB. With respect to claim 1, various delivery commencement and delivery-termination indications were identified from within DAVIC MIB. Among them, the session *StartTime* record was identified as indicating delivery-commencement, and *sessionEndTime* and detailed TRAP records were identified as indicating delivery-termination. From their names-alone, it is clear that these DAVIC MIB records include time information, in satisfaction of the first limitation.	
	The second limitation also is disclosed by DAVIC MIB, for example, through its logging of TRAP records. DAVIC MIB teaches a streams element that monitors the streaming session, as discussed above in reference to claim 1 of the '622 patent. The streams element creates TRAP records based on detected "rejections, aborted streams, and communications problems." See, e.g., p. 113, right column. By creating a TRAP record corresponding to a detected abort, rejection or communication problem, DAVIC MIB contemplates that verifying a user's access includes indicating abnormal terminations. For at least this reason, DAVIC MIB meets this limitation in that DAVIC MIB contemplates the notion of monitoring a streaming session for abnormal termination and generating delivery-termination indications that include indications of abnormal termination.	
	The third limitation also is disclosed by DAVIC MIB. DAVIC MIB generates and starts streaming session records to indicate the start of the delivery of a stream of packets. See, e.g., p. 113, left col. (in the *streamEntry* record is a *sessionStartTime* record defined as the "time this session started or is scheduled to start"). Streaming session records and TRAP records also are generated and stored, individually and collectively indicating the termination of packet stream delivery. See p. 112, right col. and p. 113, left column. By maintaining the aforementioned records to reflect or otherwise indicate delivery commencement and termination, a data collection or database is maintained and updated. Accordingly, DAVIC MIB discloses updating the records of a database in response to indications provided by the DAVIC server elements related to initiation and termination of streams. For at least these reasons, each limitation of claim 24 is anticipated by DAVIC MIB, supporting a conclusion of invalidity.	

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generating delivery-commencement indications of real-time information to the user, wherein the real-time information comprises a plurality of packets comprising audio information, or video information and is forwarded over the communications network to the user, and wherein the commencement indications further comprise time information,		
verifying the operational status of the user's access to the communications network during delivery of the real-information, wherein the operational status includes abnormal termination,		
generating delivery-termination indications of the real-time information to the user, wherein the termination indications further comprise time information and indications of any abnormal termination, and		
updating a database with information provided by the delivery-commencement and the delivery-termination indications.		
25. The method of claim 24 wherein the step of verifying further comprises forwarding over the communications network messages concerning the operational status of the user's access to the communications network.	102	See claim 6 of the '622 patent.
26. The method of claim 24 further comprising a step of determining the total delivery time of the real-time information to the user from the delivery-commencement and the delivery-termination indications.	102	See claim 13 of the '622 patent.

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27. The method of claim 26 wherein the total delivery time is determined as the total elapsed time between delivery-commencement and delivery-termination indications during which the user's access to the communications network was also verified to be in an active/working operational status.	102 See claim 15 of the '622 patent.	
28. The method of claim 24 further comprising generating indications of the content of the real-time information, and wherein the database is updated with information provided by the content indications.	102 See claim 17 of the '622 patent.	
29. A method for forwarding real-time information to one or more users having access to a communications network comprising:		
processing one or more streams of audio or visual information into one or more streams of packets for forwarding over the communications network, wherein at least one stream of packets comprises audio or video information,	As for the first limitation, in our analysis of claim 1 of the '187 patent, DAVIC MIB was shown to disclose converting. Because converting involves processing, the reasoning applied with respect to claim 1 of '187 patent is directly applicable to claim 29. Accordingly, this limitation is met by DAVIC MIB for the reasons disclosed previously with respect to the "converting a plurality of streams" limitation in claim 1 of the '187 patent.	
forwarding the digital packets to the users in response to information selection signals received from the users,	As for the second limitation, the application of DAVIC MIB to video "on demand" (VOD) necessarily implies delivery (i.e., forwarding) of video in response to selection signals received from a user, hence "on demand." Accordingly, this limitation is met by DAVIC MIB.	
verifying the operational status of the users' access to the communications network during delivery of the real-time information, and	See claim 1 of the '622 patent.	

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updating a database with indications of: (i) which streams of packets were received by which users,	As for the third limitation, in our analysis of claim 24, streaming session records store stream start times, and streaming session and TRAP records each store indications of recipient and the start and stop times. Moreover, the streaming session record and TRAP records collectively may be used to devise stop time for each received stream, such that they collectively indicate stream commencement and termination times. See, e.g., p. 113, left column (in the *streamEntry* record is a *sessionStartTime* record defined as the "time this session started or is scheduled to start"). See also p. 112, right column and p. 113, left column. Furthermore, the streaming session records and TRAPs indicate the particular recipient end-users through association with the session records in a *sessionTable* and another Table of clients. See, e.g., p. 113, left and right columns. Consequently, DAVIC MIB maintains records that enable determination and thus indicate the start time, stop time, and end user for each stream. The maintenance of such records necessarily involves updates to a data store (a database). Accordingly, DAVIC MIB discloses updating the records of a database with indications of which streams were delivered to which users and with indications of stream start and stop times.	
(ii) the time when delivery of each stream to each user commenced, and		
(iii) the time when delivery of each stream to each user terminated.		
30. The method of claim 29 wherein the operational status includes abnormal termination, and wherein the termination time of each data stream further comprises indications of any abnormal termination.	See claim 2 of the '622 patent.	102
31. The method of claim 29 wherein the step of verifying further comprises forwarding over the communications network to the users messages querying the operational status of the users' access to the communications network.	See claim 8 of the '622 patent.	102

Claim Charts for U.S. Patent Nos. 5,778,187, 5,983,005, and 6,434,622

Claims for U.S. Patent No. 6,434,622 filed July, 17, 2000 (claiming priority to U.S. Patent No. 5,778,187 filed May 9, 1996)	DAVIC MIB for Video Server System Management	Other References
32. The method of claim 29 wherein the messages concerning the operational status of the users' access to the communications network are initiated by the users.	102	
33. The method of claim 32 wherein the messages concerning the operational status of the users' access to the communications network are received by the user and responded to by the user.	102	
34. A method for a user having access to a communications network to obtain real-time information comprising:	102	
	The interactive video services system disclosed in DAVIC MIB includes video servers that transmit real-time information to end-user set top boxes that have access to a delivery network. See, e.g., p. 111, left column. Accordingly, DAVIC MIB contemplates the notion of end-users having access to a delivery network to obtain real-time information as streams of packets.	
forwarding selection signals over the communications network from the user indicating the real-time information desired,	DAVIC MIB describes management of an interactive voice services system to provide video on demand (VOD) services. See p. 109, abstract. Specifically, by providing VOD services, DAVIC MIB necessarily contemplates the notion of starting a stream in response to user selection of a video, hence video is provided "on demand." Moreover, in satisfaction of this claim element, selection signals are forwarded over the delivery network from the user to indicate the real-time information (i.e., video stream) desired.	
receiving one or more streams of packets forwarded to the user over the communications network in response to the selection signals, wherein at least one stream of packets comprises audio or video information, and	DAVIC MIB provides for generation and delivery of video streams to end-user set top boxes in response to user requests. See, e.g. p. 111, left column.	
verifying the operational status of the communications network access during delivery of the real-information.	As described previously in reference to claim 1, DAVIC MIB meets the limitation of verifying the operational status of a user's access to the communications network while a stream is being delivered.	

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Claims for U.S. Patent No. 6,434,622 filed July, 17, 2000 (claiming priority to U.S. Patent No. 5,778,187 filed May 9, 1996)	DAVIC MIB for Video Server System Management	Other References
35. The method of claim 34 wherein an identifier is provided by the user.	102 See claim 18 of the '622 patent Claim 35 differs slightly from claim 18 in that claim 18 includes (1) the limitations of independent claim 34 (previously shown to be anticipated by DAVIC MIB), and (2) recites that the identifier is provided by the user rather than for the user. DAVIC MIB describes a management tool for an interactive video services system. See, e.g., p. 111 (abstract). A component of the management tool is related to business management with respect to billing. See e.g., p. 110, right column. Since a user directly or indirectly must provide identification to be billed for services, DAVIC MIB contemplates the notion of an identifier being provided by a user.	
36. The method of claim 34 wherein the step of verifying further comprises responding to messages forwarded to the user concerning the operational status of the user's access to the communications network.	102 See claim 8 of the '622 patent.	
37. The method of claim 34 further comprising the step of forwarding termination signals from the user indicating that termination of the streams of packets is requested.	102 and 103 With respect to claims 37 and 38, DAVIC MIB describes a management tool for an interactive video services system that supports VOD services. VOD services enable a user to perform various operations including play, ffwd, rewind, stop, and pause. DAVIC MIB provides support for these operations by providing streaming session records that include a *stream State* entry that includes: "Play, Ffwd, Rwd, Pause" and by providing TRAP entries for aborted or terminated streams (i.e., "stopped" streams). See p. 111, left column, p. 112, right column, and p. 113, left column. Accordingly, and in view of these other well—known user controls, it would have been obvious to have enabled a user to stop a stream presently being delivered through submission of a termination signal. Thus, like any conventional VOD system, DAVIC MIB could be said to contemplate a termination signal or stop signal being forwarded from the user to request termination or abortion of a stream.	
38. The method of claim 37 wherein the termination signals from the user are voluntary.	102 and 103 See claim 37 of the '622 patent.	

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Claims for U.S. Patent No. 6,434,622 filed July, 17, 2000 (claiming priority to U.S. Patent No. 5,778,187 filed May 9, 1996)	DAVIC MIB for Video Server System Management	Other References
39. The method of claim 37 wherein the termination signals from the user are involuntary.	102 and 103	
	With respect to claim 39, DAVIC MIB discloses monitoring streams for abnormal terminations that may arise from stream rejections and communications problems. See p. 112, right column. As discussed above with respect to claim 1 of the '622 patent, these abnormal terminations may be involuntary to the extent that they arise from network access problems and streaming software-related problems. Moreover, acknowledgement-based communications and protocols involve exchange of messages during the acts related to establishing and maintaining communications between one system and another system (e.g., an attempted handshake). To the extent that these processes exist at the interfaces between the end-user set top box and the video server, messages exchanged between the end user set top box and the video server reflect communication problems and termination of communications. These termination messages similarly may be involuntary.	
40. A system for a user to obtain real-time information over a communications network comprising a programmable device,	102	
	As described previously, the DAVIC MIB manager system presupposes an underlying interactive video services system to be managed. Also presupposed by the management system described in DAVIC MIB are set top boxes used to communicate with the underlying interactive video services system, since the VOD servers of DAVIC MIB would have no purpose in the absence of set top boxes. Set top boxes are programmable devices.	
wherein the programmable device has access to the communications network, and	The end-user set top boxes have access to the delivery network. See p. 111, left column.	
wherein the programmable device includes user software for causing the computer to forward selection signals from the programmable device indicating the real-time information desired,	DAVIC MIB describes a management tool for an interactive video services system that supports video on demand (VOD) services and, therefore, supports provision of video streams to end-user set top boxes in response to user video selection signals. See p. 109, abstract, and p. 111, left column. Accordingly, DAVIC MIB contemplates the notion of an end-user set top box that includes user software for forwarding selection signals indicating the video "on demand."	
receive one or more streams of packets forwarded to the programmable device in response to the selection signals, wherein at least one stream of packets comprises audio or video information, and	As described previously with respect to claim 1 of the '187 patent, the DAVIC server sends video streams corresponding to the video "on demand" to the end-user set top boxes as packet streams of video information.	

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Claims for U.S. Patent No. 6,434,622 filed July, 17, 2000 (claiming priority to U.S. Patent No. 5,778,187 filed May 9, 1996)	DAVIC MIB for Video Server System Management	Other References
verify the operational status of the programmable device during delivery of the real-time information.	As described previously in reference to claim 1, DAVIC MIB meets the limitation of verifying the operational status of a user's access to the communications network while a stream is being delivered. Since the user accesses the communications network through a set top box, the disclosure previously used to show that DAVIC MIB teaches verifying the operational status of the user's access also can be relied upon to show that DAVIC MIB teaches verifying the operational status of the set top box (i.e., programmable device). Accordingly, each limitation of claim 40 is met by DAVIC MIB, supporting a conclusion of invalidity.	
41. The system of claim 40 wherein the programmable device comprises a personal computer, or a personal digital assistant, or a telephone, or a mobile phone, or a terminal device, or a television set-top box, or a game console.	102 DAVIC MIB indicates that a set top box is used. See p. 111, left col.. Accordingly, claim 41 is invalid since each and every limitation of claim 41 is disclosed in DAVIC MIB.	
42. The system of claim 40 wherein the user software further causes the programmable device to initiate and forward over the communications network messages concerning the programmable device's operational status.	102 See claim 7 of '622 patent.	
43. The system of claim 40 wherein the user software further causes the programmable device to respond to messages forwarded to the programmable device concerning the programmable device's operational status.	102 See claim 8 of '622 patent.	
44. The system of claim 40 wherein the user software forwards over the communication network a unique identifier.	102 and 103 Claims 44–46 differ from claim 18 in that (1) claim 44 depends from independent claim 40 (previously shown to be anticipated by DAVIC MIB); and (2) claims 45 and 46 depend from claim 44 reciting that a unique identifier is provided (claim 44) by a programmable device (claim 45) or user software (claim 46). Claims 44–46 are anticipated by DAVIC MIB. DAVIC's interactive video services system provides for video selection signals, as discussed above with respect to claim 40. As in any communications protocol over a network, the video selection signals include header or source information, uniquely identifying the source of the signals (e.g., the packet header has a source IP address). The set top box and associated software send the video selection signals and thus, the unique identifier, over the communications network.	102 and 103 Moreover, provision of an identifier by the programmable device would be obvious in view of the teachings of Real. In that reference, an internet protocol address is provided by the client systems to the RealAudio Server to identify the client systems. See Appendix B, page 1. A skilled artisan would have been motivated to apply the teachings of Real to the teachings of DAVIC MIB to facilitate identification of the set top boxes without requiring cumbersome and inefficient polling by the video server.

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Claims for U.S. Patent No. 6,434,622 filed July, 17, 2000 (claiming priority to U.S. Patent No. 5,778,187 filed May 9, 1996)	DAVIC MIB for Video Server System Management	Other References
45. The system of claim 44 wherein the identifier is provided by the programmable device.	102 and 103	
46. The system of claim 44 wherein the identifier is provided by the user software.	See claim 44 of the '622 patent.	102 and 103
47. The system of claim 40 wherein the user software comprises an Internet browser.	102	
	DAVIC MIB contemplates offering VOD over the Internet. See, e.g., p. 111, left column. ("The stream elements are launched to support VOD (Video on Demand)) and p. 113 ("*sessionStreams IpAddress,*" and "*sessionApplications IpAddress,*"). Inasmuch as video selections are made available to the user, the set top box software functions as a browser of the Internet in that it enables a user to browse content and select content (i.e., videos) provided over the Internet.	
48. The system of claim 40 wherein the user software further causes the programmable device to display a channel guide, a program guide, or a multimedia frame.	102	
	Inherent to a video on demand (VOD) service is a program guide or menu to enable selection of a program to be received by the user. Since DAVIC MIB contemplates offering VOD services, the set top box must necessarily display such a program guide; otherwise, end user would be unable to select and demand videos. See, e.g., p. 109, abstract. Accordingly, claims 48 and 55 are invalid since each and every limitation of claim 48 and 55 are disclosed in DAVIC MIB.	
49. The system of claim 40 wherein the programmable device's operational status comprises its access to the communication network.	102	
	As discussed previously with respect to claim 1, DAVIC MIB describes monitoring streaming sessions for stream rejections and communications problems with the end-user set top boxes. To the extent that communications problems or stream rejections reflect network access problems or lack thereof, a skilled artisan would recognize that DAVIC MIB, in monitoring for rejections and communications problems with the set top box, anticipates the notion of the set top box being configured to verify its access to the communication network.

Furthermore, also described earlier with respect to claim 1 was the notion of SNMP polling operations within DAVIC MIB, which polling operations involved verification of user device network connectivity on a periodic basis, thus meeting the claim 49 limitation. Accordingly, claim 49 is invalid since each and every limitation of claim 49 is disclosed in DAVIC MIB. | |

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Claims for U.S. Patent No. 6,434,622 filed July, 17, 2000 (claiming priority to U.S. Patent No. 5,778,187 filed May 9, 1996)	DAVIC MIB for Video Server System Management	Other References
50. A software product comprising user software on a computer readable medium for causing a programmable device having access to a communications network to forward selection signals from a user indicating real-time information desired,	102	
receive one or more streams of packets forwarded to the user in response to the selection signals, wherein at least one stream of packets comprises audio or video information, and	Claim 50 corresponds to claim 40. In fact, the only difference between claim 50 and corresponding claim 40 is the statutory class of the invention. Specifically, unlike claim 40 which is directed to a system, claim 50 is directed to a product. Thus, the substantive limitations found in claim 50 were addressed previously with respect to the earlier-provided discussion of claim 40. Moreover, for the reasons articulated with respect to claim 40, the limitations of claim 50 are met, such that a finding of invalidity is proper.	
verify the operational status of the computer during delivery of the real-information.		
51. The product of claim 50 wherein the user software further causes the programmable device to respond to messages forwarded to the programmable device concerning the programmable device's operational status.	102	See claim 8 of the '622 patent.
52. The product of claim 50 wherein the user software further causes the programmable device to initiate and forward over the communications network messages concerning the programmable device's operational status.	102	See claim 7 of the '622 patent.
53. The product of claim 50 wherein the user software forwards over the communication network a unique identifier.	102	See claim 18 of the '622 patent

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Claims for U.S. Patent No. 6,434,622 filed July, 17, 2000 (claiming priority to U.S. Patent No. 5,778,187 filed May 9, 1996)	DAVIC MIB for Video Server System Management	Other References
54. The product of claim 50 wherein the user software comprises an Internet browser.	102 See claims 20 and 47 of the '622 patent	
55. The product of claim 50 wherein the user further causes the programmable device to display a channel guide, a program guide, or a multimedia frame.	102 See claim 48 of the '622 patent.	
56. The product of claim 50 wherein the user software is provided in a form that is downloadable over the communications network.	102 DAVIC MIB describes a management tool for an interactive video services system that is capable of downloading client applications into end-user set top boxes over a delivery network. See p. 111, left column, ("[The service gateway] also supports downloading client applications to the set top boxes (STBs)"). Accordingly, claim 56 is invalid since each and every limitation is disclosed in DAVIC MIB.	